COIN-OPS, CARTS AND COMPUTER SOFTWARE REVIEWS

VIDEO GAMES™

FEBRUARY 1984
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No. 17

Discovering The Origins Of Game Playing

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SPECIAL REPORT

ARCADE '84 Highlights And Previews Of The Newest Coin-Ops

Mind Games— A *Shocking* Sci-Fi Tale

Latest Computer Games For Atari, Apple, VIC-20 And Commodore 64 And Over Two Dozen Home Carts and Coin-Ops

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Alien annihilation never sounded so good.

Because we've broken the sound barrier on home computer games. With music. You heard right. Music.

And we're not talking mamby-pamby little bleeps here, pal. We're talking toe-tapping, finger-snapping, Top-40 stuff. Scored just for our newest releases. And playing throughout.

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From strategy games to shoot 'em ups.

Are you ready to face the music?

If Our Music Has You Hearing Things, Wait Till You See This.

Incredible, arcade-quality graphics.

And they're so great—how great are they? They're so great you'll want to play them again and again. And then you'll tell your friends about them. And they'll want to play. And then your family will find out and they'll all want to play. And then that fat kid down the block will want to play. And all your sister's friends. And their boyfriends. And . . . better keep our newest releases a secret. Or get Dad to pop for another Atari.

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It's just like a movie.

Except, instead of filling both hands with buttery popcorn, you've got your hand on the Joystick, tensed up for what's to come.

And while you wait, poised, ready, eager, you'll find out, through the terrific screen titles, the objective of the game, the characters and the scenario.

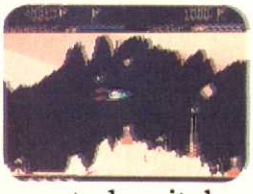
You'll find out what planet you're on.

What the fuss is all about.

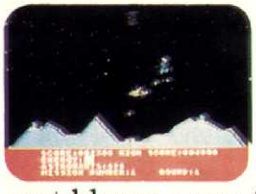
Why you're involved.

And perhaps of singular importance to you, how to keep from being obliterated.

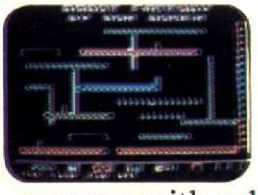
real music for your Atari.*



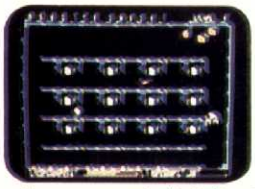
Our star. Our Numero Uno. The Tail of Beta Lyrae.™ Changes as you play. Will drive you out of your mind with unexpected switcheroonies. No one's ever mastered it. But you sure can try...



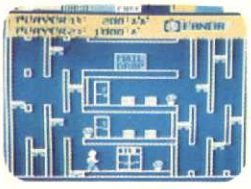
And then there's Cosmic Tunnels.™ Four games in one. Meaning four times the challenge. Four times the chance you might just get blown away. The graphics are sure to blow your mind!



Mr. Robot and His Robot Factory.™ Looking for a factory job? Here's an opening. Help Mr. Robot thwart the aliens. Screens scream with color, action and sound! Plus, a graphics kit to design your own game screens!



Monster Smash™ is the gravest game to ever hit the cemetery. And it's filled with a deathly strategy. What do you have to do? Mash the monsters! Let the visitors live.



Cohen's Tower™ gets you used to life in the Big City fast. Starting you off in a skyscraper. But the boss is really watching. So work fast. You might just get a raise... if you can handle the action.

Get ready to bring your Atari the most playable, the most graphically involving new games it's ever screened. Or heard.

It's the most out of our minds.

And together, with your Atari, we make beautiful music.

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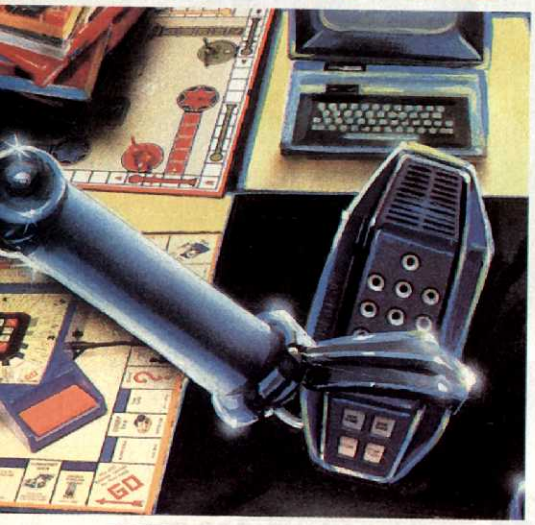

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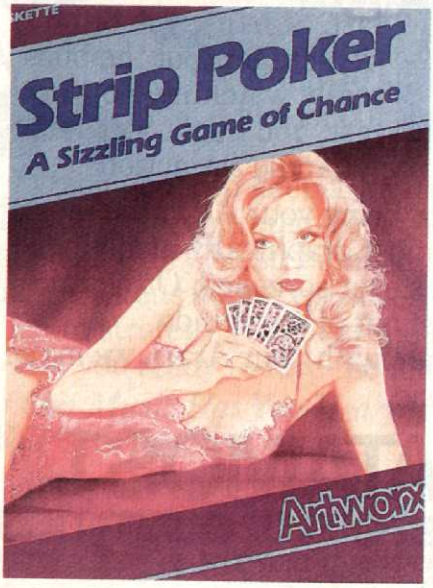

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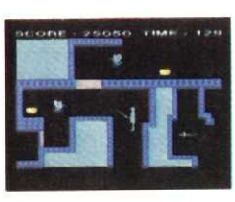
Cover photo of Clint Eastwood from *Firefox* courtesy of Warner Bros.

WELCOME TO APSHAI. YOU'RE JUST IN TIME FOR LUNCH.



Boy, have you taken a wrong turn. One moment you're gathering treasure and the next you're being eyed like a side of beef.

You're in the Gateway to Apshai.™ The new cartridge version of the Computer Game of the Year,* Temple of Apshai.™

Gateway has eight levels. And over 400 dark, nasty chambers to explore. And because it's joystick controlled, you'll have to move faster than ever.

But first you'll have to consider your strategy. Is it treasure you're after? Or glory? You'll live longer if you're greedy, but slaying monsters racks up a higher score.

The Apshai series is the standard by which all other adventure games are judged. And novices will not survive.

They'll be eaten.

One player; Temple of Apshai, disk/cassette; Gateway to Apshai, cartridge, joystick control.

EPYX COMPUTER SOFTWARE

STRATEGY GAMES FOR THE ACTION-GAME PLAYER.

*Game Manufacturers Association, 1981

VIDEO GAMES

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HYPERSPACE

There is, admittedly, a certain amount of excitement and anticipation attached to any trade show. But, somehow, the coin-op events seem to transcend all others, even the Consumer Electronics Show. The reason might well be the set up. After all, you enter into a spectacle which is nothing but the newest games and amusement equipment, right there before you, all on free play. For those who are really into games and enjoy playing, the occasion is like a dream come true. The only need is the physical stamina to take it all in, trying out every machine and contraption as well as walking up and down the aisles to see what's lurking in some far off corner.

That sense of discovery is an exhilirating sensation especially when you can encounter someone and ask them if they've seen your 'find'.The give and take is incredible, because you're able to gauge the mood of an entire industry and the general responses to particular equipment and design directions.

Since coin-op does remain on the cutting edge of how the latest technologies are being applied, *Video Games* has pulled together a special report which takes you behind the doors of the Rivergate Exposition Center down in New Orleans where the AMOA was staged at the end of October. Beginning on page 30, you'll get all the news and previews as seen through my eyes and Steven Epstein, an amusement center operator and owner, contributing editor Steve Harris, a high scoring player from Missouri who was attending his first coin-op convention, and Valerie Cognevich, the editorial director for *Play Meter*, one of the industry's premier trade publications.

As has become the case in recent years within the arcade game world, sometimes all the news isn't available on the show floor. However, *Video Games* has strived to once again be there first with the latest. On page 26 we bring you the result of those efforts with an exclusive up-close look at Atari's soon-to-be-released laservideo creation, Firefox. Based on the Clint Eastwood movie, the advance word indicates that this may well be a game to be on the look-out for, not only because of some spectacular visuals and action sequences, but also some exceptional sound effects and speech.

However, not all the events taking place are coin-op derived. In fact, on page 20 you'll read about the origins of game play over the years and why we may be seeing the types of designs currently available. Elsewhere, J. Ray Dettling is back on these pages with an impressive work of science fiction that might not be that far-fetched given recent developments. "Mind Games", which begins on page 58, serves up a world we could find ourselves living in, not too far down the road, especially given the obvious obsession to make all future games more realistic and interactive.

Rounding out this month's *VG*, you'll find another installment of game strategies for Gottlieb's Krull and Williams' Motorace USA (page 42) and a wealth of home carts and computer software reviews of some of the newest releases to hit the shelves. And, if you thought Texas Instruments was a dead issue, Mark Brownstein's 'Hard Sell' of the model CC-40 (page 79) might give you some reasons to reappraise your position as this potent portable delivers substantial computing power.

Roger C. Sharpe

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WHERE WINNING IS THE PITS.

You'll never make Grand Prix champion just driving in circles.

You've got to stop sometime. The question is when. Right now you're in the lead. But the faster you go, the more gas you consume. And the quicker your tires wear down.

If you do pull into the pits, though, you lose precious seconds. So it's up to you to make sure the pit crew is quick with those tires. And careful with that gas. Otherwise, poof! you're out of the race.

See your retailer for available computer formats.

So what'll it be, Mario? Think your tires will hold up for another lap? Or should you play it safe and go get some new ones?

Think it over. Because Pitstop™ is the one and only road race game where winning is more than just driving. It's the pits.

Goggles not included.

One or two players; 6 racecourses, joystick control.

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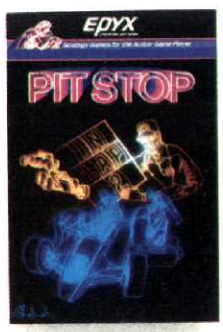


Double Speak

Open Forum

What kind of contract does your magazine have with Atari? You seem to be pushing this system to the limit. I have seen publications that are a little one-sided, but your magazine gives new meaning to the phrase. Your so-called "great debate" between the owners of the ColecoVision and Atari 5200 owners is nothing more than an old and cheap publication gimmick that I thought went out with Packards. Another example of your bias is your reviews of home game cartridges. You had nine reviews of Atari 2600 cartridges and not one of any other system on the market. You also neglected to mention the fact that you used 5200 graphic representations for three of your "reviews." This, my friend, borders on the subject of false advertising. It seems that the only Coleco product you did bother to even mention was a system designed to play 2600 cartridges. I buy these game magazines mainly for the information on new home releases I might want to add to my collection but your publication is of no use to me in this area. Last, but certainly not least, the statement by editor Roger C. Sharpe that "*VG* covers the world of video games like no one else can" is something you should seriously think about retracting. However an easy way to get around this is to just rename your magazine *Atari Monthly* or something similar. I wrote this letter in an effort to get your attention on the subject of journalistic fairness, and an attempt to make your staff realize that there is a world beyond the Atari 2600. A sincere effort on your part could net you a whole cache of new readers and subsequently increase sales. I hope that you have read this last paragraph carefully and take this letter in the spirit it was intended.

William D. Harding, Jr.
Frankfort, Ky.

Dear Mr. Harding,

If providing an open editorial forum for readers, who want to express their likes and dislikes about anything having to do with video games, even if it encompasses views about given systems, can be called an 'old and cheap publication gimmick' than Video Games Magazine *is guilty. However, the feeling here is that* VG *readers buy this magazine because of content above and beyond the letters column.*

As for your comments regarding our bias for Atari, the issue seems to be less our problem and more your interpretation of what appeared on the pages of the December issue. If you would have closely read the opening section of Soft Spot you would have discovered that the column for the month was focusing on the revival of the 2600 system. After all, so much attention has been paid to second and third generation systems, and yet the venerable 2600 continues to receive support. In fact, if you would have noticed in your condemnation of our editorial policy; in looking at the nine reviews, six were from different companies. Hopefully you don't think that VG *has a contract with Atari which allows us to force other manufacturers to produce carts just for the 2600.*

Your point was well taken concerning the visuals and for that we do offer an apology. However, we truly believe that VG *is a special magazine in the field that gives readers the kind of information and insights that can't be found in any other video game-oriented publication. If there are areas we should be doing something more on, we get a great deal of our direction from those readers who fill out and mail back to us our monthly questionnaire.*

If you, or any other reader, has some specific suggestions for how we should be covering certain topics, or what we can add or delete to make VG *a better magazine, we're more than willing to listen and respond accordingly.*

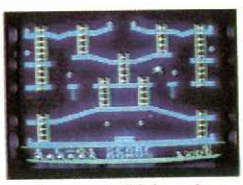
In closing, just don't take offense to the fact that the dialogues continue between readers whether it's comparisons or contrasts between systems or any other subject. And, lastly, it is hoped that you too will take this response to your letter in the spirit it *was intended.*

—Ed.

To All The Friends Of Harry Williams

I want to thank your for your warm expression of love and respect for Harry and me. My beloved Harry died Sunday, September 11, 1983 at 10:50 PM in Desert Hospital. He was given the last rites and I was blessed enough to be at his side when he gave his life over to God. Harry was a most marvelous man and my years with him were a rich treasure. I was always aware of his courage, love and gallantry, but never more so than his final battle with cancer. He never lost hope, he never gave in to the disease that punished his body with such pain. He was alert and planning for the future. He even continued to work until March. His mind was always creating. He was inventing a new game and had remarked to a friend of mine how much he wished to go home from the hospital to finish his project. That was the kind of man Harry was—always anxious to give more to people, to somehow make people's lives a little easier. Perhaps, to give joy and peace to a society that desperately needs it. He was a humble man who never sought recognition for himself. Maybe, he never really knew that he would leave a legacy through his work, but I know he has done that and I thank God everyday for the gift of Harry

JUMPMAN'S A GREAT GAME. BUT YOU'VE GOT TO WATCH YOUR STEP.



Meet the Alienators. A fiendish bunch who've planted bombs throughout your Jupiter Command Headquarters.

Your job? Use your lightning speed to scale ladders, scurry across girders, climb ropes and race through 30 levels to defuse the bombs before they go off.

That's the kind of hot, non-stop action we've packed into the award-winning,* best-selling Jumpman,™ and into Jumpman Jr.,™ our new cartridge version with 12 all-new, different and exciting screens.

Both games force you to make tough choices. Should you avoid that Alienator, climb to the top and try to work your way down, or try to hurdle him and defuse the bombs closest to you before they go off?

If you move fast you'll earn extra lives. But if you're not careful, it's a long way down.

So jump to it. And find out why Jumpman and Jumpman Jr. are on a level all their own.

One to four players; 8 speeds; joystick control. Jumpman has 30 screens. Jumpman Jr. has 12 screens.

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Bring the video game revolution to your house.

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Double Speak

(continued from page 8)

Williams. My blessing to all of you and thank all of you for the great support you have given me.

With love,
Wanda Williams and daughter, Kitchy
Palm Springs, California

I own a ColecoVision and have compared it to the Atari 5200 and have come to the conclusion that it surpasses the 5200. Atari has some great games but Coleco has better games some of which are Buck Rogers, Planet of Zoom, Time Pilot and Mr. Do! Coleco also has more expansion modules than any other system around; the best one is probably ADAM — the Coleco family computer — which has more memory than any other computer around. In addition it also has a letter-quality daisy wheel printer and a built-in digital datapack drive which can hold up to 500K bytes. That's more than three times the storage than most floppy disks! Coleco also plans to make modem to plug into Colecovision for delivery of video games over the phone! And since Coleco owns the rights to Dragon's Lair they might deliver that game over the phone. My advice is to take back or sell your 5200 people. Now I hope you'll agree ColecoVision is the best system.

J.D. Long
Cedar Rapids, Iowa

Getting The Bug

I picked up the October '83 issue of *Video Games* and I must say I was very impressed with John Holmstrom's Coin-Op on Atari's Black Widow. I also noticed you mentioned a "giant dollar sign with wings like a dragonfly." What you have met up with is the "bonus bug." When you start on a level higher than level 1, you receive a bonus by means of a bonus bug. I always start on the highest level I can get so as to get the highest bonus. My highest score so far has been 483,525.

Ken Welch
Milford, MA.

Thanks for the tip!—Ed.

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BLIPS

Entering Another Dimension

Another dimension has unfolded in the world of video games. Advanced computer technology has created Bouncer, a 3-D real time interactive arcade video game. In this seven character video game, the Bouncer is controlled by the trackball and his mission is to walk or run (depending on how fast the trackball is moved) around the bar, removing undesirable characters before they bother patrons. Four different locations have been chosen for the action to take place in: Hussang's Cantina, Gulley's, Studio 64, and The Ritz. At the end of each round, if there is at least one happy customer left in the Bouncer's bar, he moves onto the next bar for the next round.

This game is unique in that there are 500 original images as compared to 50 or less in the average arcade video game. These images evolved from the talents of a professional cartoonist/animator who has had extensive experience at Walt Disney and Hanna-Barbera. Also, an extensive soundtrack with full speech and music was developed for this game.

Based in Huntington Beach, California, Entertainment Sciences is a new company on the coin-op scene which has already gained a great deal of attention regarding this initial effort.

Although the theme of the game could conceivably be seen as more sophisticated in nature, given the scenarios on screen, Bouncer did receive some positive feedback at the AMOA where it was unveiled to the arcade industry for the first time.

What makes Bouncer so exciting visually is the development by Entertainment Sciences of a new state-of-the-art hardware system. It's a real-time image processor with 1 million bytes of memory, 3 eight-bit and 1 sixteen-bit microprocessor, high resolution graphics and full speech capability. At a time when so much attention has been focused on laserdisc applications such as Dragon's Lair, Bouncer provides a very viable alternative. In fact, graphic design consultant Jon Conrad told VG that this is just the beginning. "Entertainment Sciences is committed to introducing a whole new generation of video games with imaginative storylines that are easy to play but difficult to master."

—Melinda Glass

"...perhaps the most graphically magnificent computer game yet created!"

Bill Kunkel, Electronic Games Magazine

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. . . "there is no escape!"™

By Award Winning Designer Fernando Herrera

Actual Game Screens

Science Fiction/ Fantasy Game of the Year, 1984
Electronic Games Magazine

...Most Innovative Software
Software Showcase, Consumer Electronics Show

Computer Game of the Month
The Whiz Kid, Dealerscope Magazine

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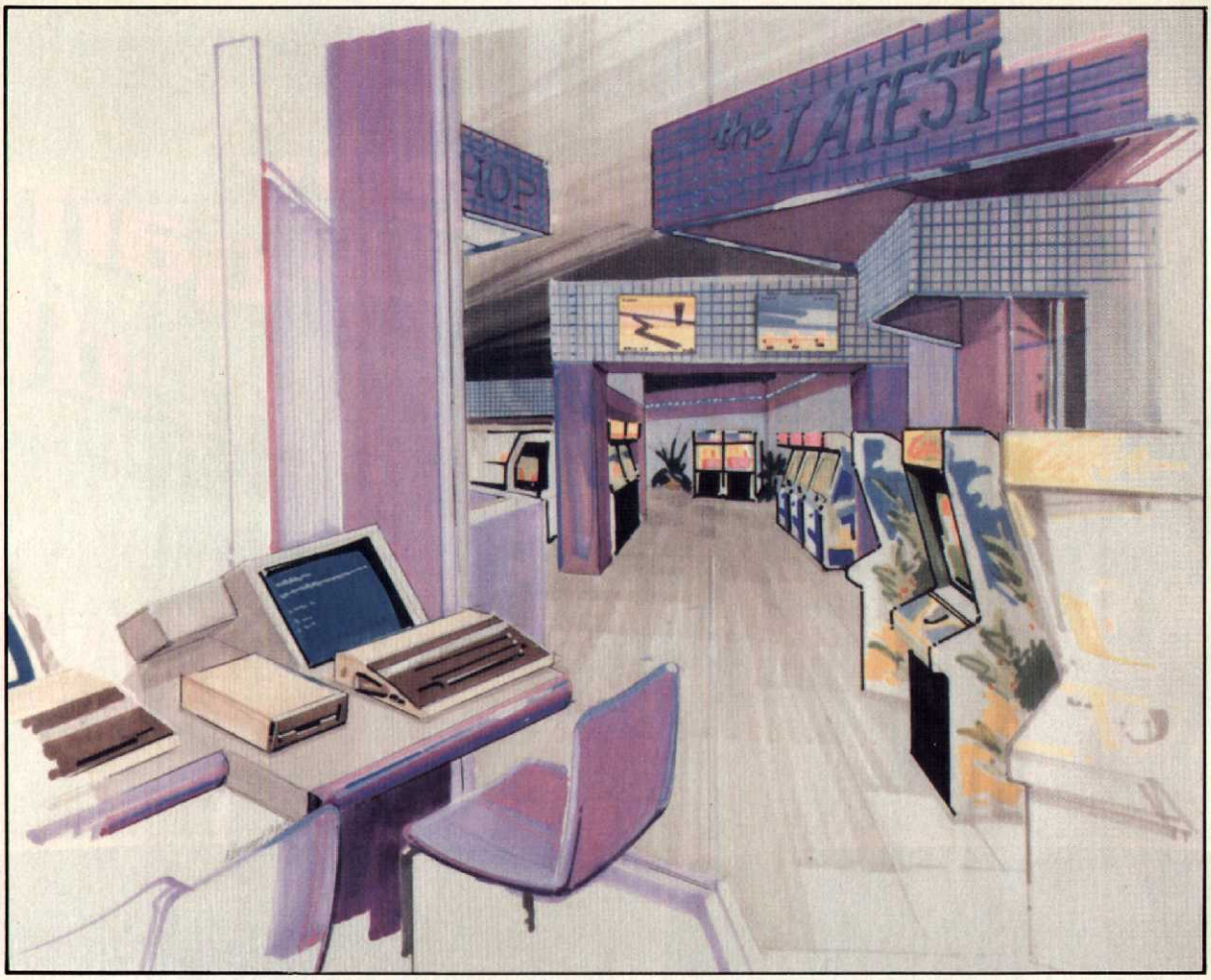


The Adventure Continues

As we reported last issue (January, *Video Games*), Atari's new family entertainment center has opened its doors in the Northwest Plaza Shopping Center in St. Louis, Missouri. Viewed as a natural extension of the company's current activities, Atari Adventure promises to provide a different setting for game playing and computer learning.

"We feel Atari Adventure is unique because it incorporates fun and learning, thus strengthening the link between playing games and computer literacy," stated Barry Sullivan, vice president of the division. "We feel eminently qualified to bring the traditional game room to a new and higher level as an entertainment and educational form."

But besides creative design and futuristic decor, this first location will also take on a different role for Atari and their notion of what players like or want from the games.

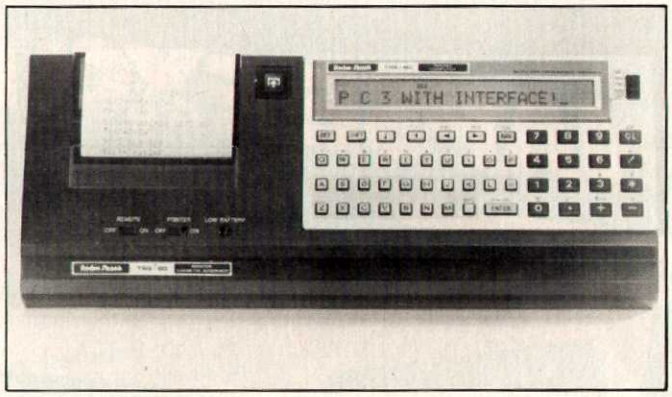
"Through Atari Adventure, we will be able to get even closer to the players, to find out what excites and motivates them," said Sullivan. "We feel it will greatly aid our research efforts in this vital area."-*R S*

Eight Is Enough

Is it possible to keep video game cartridges organized, in good condition and in an easy to locate place? It is if Blackbourn's Multiple Game Album is on hand. This attractive album holds eight cartridges (Atari and Activision video games) while protecting them from damaging dust. Sturdy vinyl pockets are included on the back cover for storing any game instruction booklets. Compact enough to fit on a bookshelf or next to your game system, it's a welcome addition to any video gamer's library. -*M G*

Pocket-Sized Bytes

For those on the go, who cannot fit that lap computer in their briefcase, there is now the Pocket Computer by Radio Shack (a division of Tandy Corporation). The four-ounce TRS-80 Pocket Computer model PC-3, is so light and small, it fits into a shirt pocket.

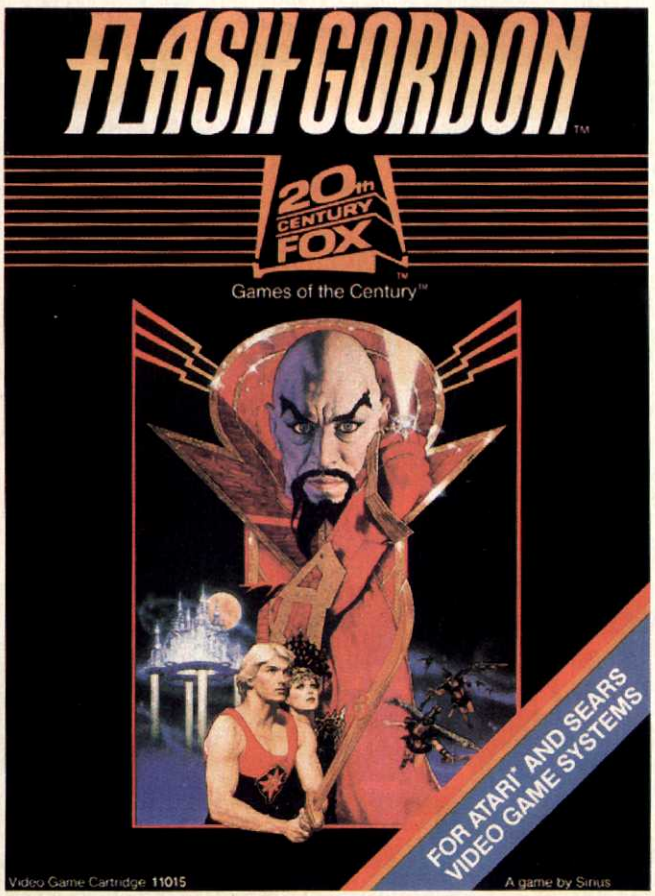


Don't think that features were sacrificed for size—this little wonder is loaded with them. Not only can it be programmed to solve problems in easy-to-learn BASIC, but it also provides 16 arithmetic and 8 string functions, with a 24 character liquid crystal display, accuracy up to 10 digits, 1.4K memory, 2-digit exponents, multiple statements & arrays and, of course, for use as a direct entry calculator. This computer newcomer is also a model of efficiency with its automatic data packing (for efficient memory space use) and automatic power-off to extend battery life.

An added plus for the PC-3 is its compatibility with Radio Shack's library of software for the Pocket Computer Model PC-1, which includes 19 ready-to-run programs on subjects such as engineering, math, statistics, aviation, personal and business finance, real estate and games. The optional PC-3 interface and recorder is all that is needed. (PC-3 about $99.95, PC-3 Printer/Cassette Interface about $119.95.)

—Melinda Glass

Another One Bites The Dust



Well, anyone who thought the video game business was going to be a cinch, has rapidly come full circle. Of course it doesn't take that much insight to realize that business has slumped during the past year as manufacturer's expectations far exceeded consumer demand. Then, one by one, the weaker companies closed up shop and turned away from what had become a far more competitive and fickle marketplace. If you're one of those who is keeping score of the casualties out there, you can add another one to the growing list. On November 8th, Fox Video Games announced that it was immediately ceasing operations. Although this division of 20th-Century Fox Film Corp. will continue to license games (obviously to other companies who are interested in tying in games with film properties), Fox will no longer develop and market games. So chalk up another one as the video game battle continues to take its toll.

—Roger C. Sharpe

Counting The Days

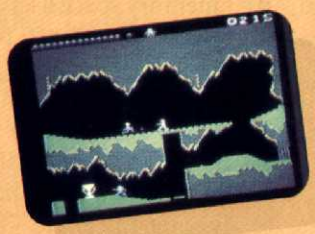
Where would we be without the convenience of calendars today? Well there's one that not only lists the "regular" holidays, but also lists significant dates for the computer that every computer buff should know. It's called the *Computer Desk Diary* and this colorful, informative schedule organizer has a large illustration with a story from computer history for each week. Stories ranging from how the term "debugging" a computer came into being, to how the first statistical engineer got his start.

This is much more than just a mere calendar. Quick reference guides for VisiCalc, Wordstar and CP/M commands are listed in the back for easy access. Additional listings include an ASCII code table, computer events for 1984 and several of the leading information services.

—Melinda Glass

SYNAPSE EXCITEMENT

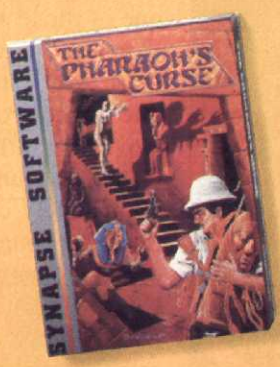
On patrol
Out of the sun comes your RAF biplane, loaded down with a deadly cargo of bombs and bullets. But watch out for the anti-aircraft guns and the enemy fighters—a hit could mean a tricky landing for repairs and ammo. **BLUE MAX.***



Ancient treasure
A fortune is yours for the taking. But can you avoid the ghost of Rama and the evil mummy? Are you nimble enough to leap the chasms and outsmart the booby traps between you and freedom? **The PHARAOH'S CURSE.***

Spellbinding
Only you can restore the forest through ancient spells. Then you must march your army of enchanted trees into battle against the Troglodytes and the evil Necromancer. Who will emerge triumphant from the final conflict? **NECROMANCER.***

Take the controls
Your helicopter mission—capture vital fuel and weapons, free the enslaved masses, and finally destroy the fortress itself. Will you triumph or be crushed by the fiendish Kraalthan lords? **FORT APOCALYPSE.***



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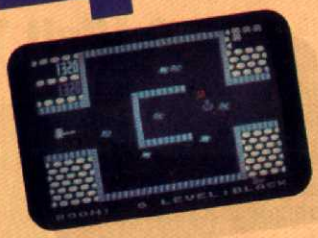
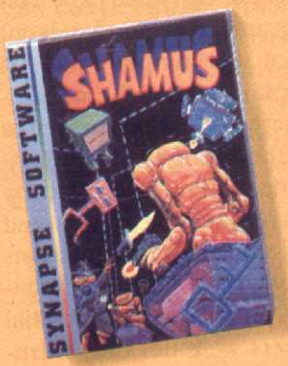


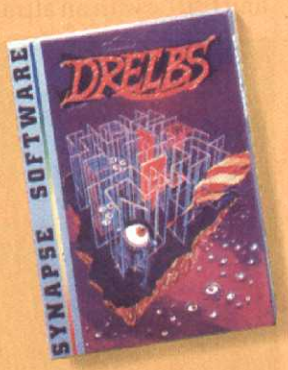
Very hot air
First the prison break, but that's only the beginning! The underground world of Zarkafir is full of surprises, from the lethal energy fields to devastating earthquakes. Can you defeat the Timelords? **ZEPPELIN.***

The Shadow knows
Deep in his lair the Shadow waits, protected by deadly Robo-Droids, Whirling Drones and Snap-Jumpers. Only the very strong and the very quick are ever seen again! **SHAMUS*** & **SHAMUS CASE II.***

Awesome action
Maybe you've played pinball before, but not like this! No time to think, no room to make even one mistake. Just quick reflexes, light body armor and a whole lot of luck between you and the end of the game. **SLAM BALL.***

Flip-flop
Into this miniature land comes the evil Trollaboars, determined to take over. Their screwhead tanks will surely crush the peaceful Drelbs, unless you can defeat them on the atomic flip grid. **DRELBS.***





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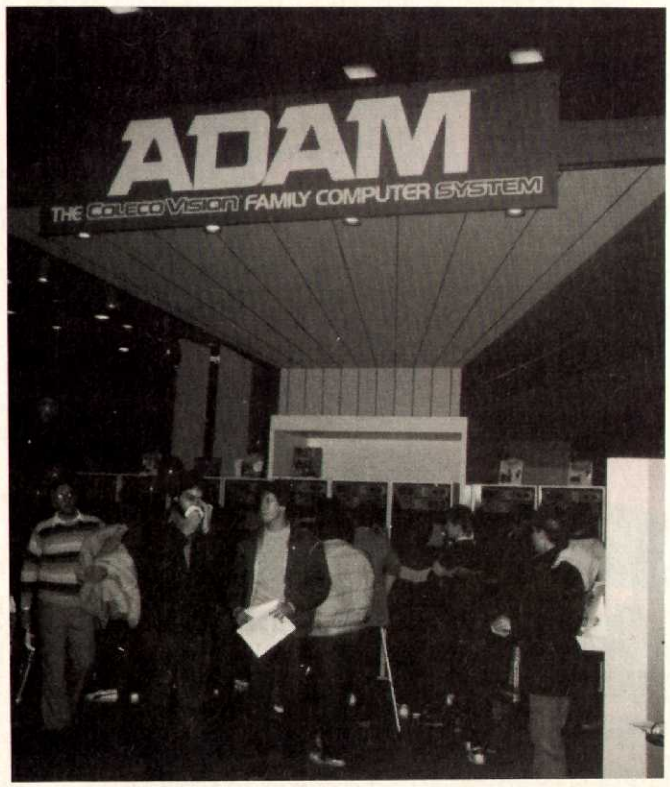
Showtime in New York
A Visit To The Electronic Fun Expo

The Electronic Fun Expo held at the New York Coliseum in the beginning of November was a small show dedicated to giving the general public a first-hand look at what a trade show is like. However, comparing this get together to a typical CES would be tantamount to pitting a pocket calculator against an IBM PC. But even this being the case, some of our industry giants were well represented. The most conspicuous entry had to be Coleco and with good reason, since the company had on display its Adam home computer system which proved to be the hit of the show. Attendees were fascinated by this revolutionary system and had any number of questions to ask the Coleco representatives at the booth. Potential buyers were not only introduced to the Adam but also had an opportunity to sample a host of the latest games for ColecoVision.

Atari also made an appearance at the show with a somewhat austere exhibit that nevertheless gave consumers the opportunity to see their new line of computers, the 600XL, 800XL, 1400XL and the 1450XLD. The company also demonstrated and showcased their new line of Atarisoft game software which has been heralded recently as one of the most positive marketing decisions Atari has ever made. Highlighting the releases were many arcade game favorites that will now be available for use on such major home and personal computers as Commodore, Apple and Coleco.

Milton Bradley's unique Vectrex system received a good amount of attention and traffic with an attractive exhibit that demonstrated their new light pen and amazing 3-D Imager. The latter allows Vectrex owners to create an amazing 3-D effect in color which raised more than a few eyebrows. Tech Sketch also had a light pen for the Commodore 64 that clearly fascinated the young crowd. Expensive hardware from Epson was present, as well, giving Big Apple residents and visitors the rare opportunity to sit down and command a top of the line desk top system.



Besides computer game companies many other video and audio products were on display from a number of major firms including Panasonic, Canon and Thorn E.M.I.

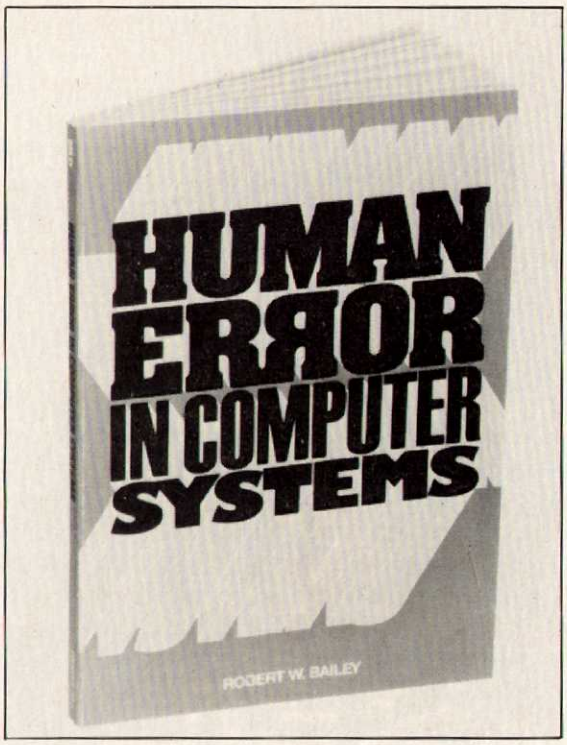
Having personally attended several CES spectacles, I admit to being somewhat jaded, but the crowd, for the most part, was fascinated and enthused by this rare opportunity to sample some state of the art high-tech products.

—Perry Greenberg

To Err Is Human

Computer errors, those nasty little mistakes that can cause endless headaches. And just how much damage can one little error do? This one example might answer that question. A missing semicolon in the computer program for a United States satellite mistakenly sent it off in the direction of the sun instead of its intended destination Mars. This "little" error cost $80 million.

There are three steps that can be taken to help control errors—prevention of errors, detection of those that occur and correction of those detected. Detecting computer errors, rather than preventing or correcting them has been the most used strategy for the past few years. However, preventing errors is much more economical, in time and money, than trying to detect them after they happen.



Robert W. Bailey of Bell Labs saw that there was a need for designers to understand issues related to human error in computer systems and has written *Human Error in Computer Systems* ($15.95 paper, Prentice-Hall, Inc., 1983). The concept for this book started in the early 1970s at Bell Labs where a human error seminar for computer-design teams was prepared by Bailey. He updated and expanded this lecture material through more than 50 repetitions and follow-up question and answer sessions.

This book presents a practical approach to the sources, causes and control of human error. An overview of ways to detect and correct errors as well is offered for those who can't work with systems from their beginning. Unlike HAL in *2001,* if there is an error in the computer, it's probably the programmers fault, not the computers. So read up and be aware.

—Melinda Glass

Rainbow Designs

Up until now, the only color produced by computers was on the monitor. Those wonderful multi-colored diagrams which were so clear and understandable at a glance would become extremely confusing when printed up in black and white. To avoid confusion, sheets and sheets of print-outs were needed to show the information that one print-out in color could do. This is not only time wasting, but frustrating. It has probably been asked time and time again, if there are colored ribbons for typewriters, why not for printers as well? Well it has happened! Data Products has available multi-colored ribbons for all computer products.

You can choose between two types of color ribbons for computer printers. They both are ¾" wide with four separate horizontal color bands. The four colors on the primary ribbon are red, yellow, blue, and black. The process ribbon offers such colors as magenta, yellow, cyan and black. With the process ribbon just about all colors that appear on the color monitor can be produced on the print-out through the use of a strikeover mode on the printer.

In the past, color ribbons have had the colors in vertical bands which was time consuming because the printer would have to wait for the ribbon to wind and re-wind as it shifted colors. This was the main reason why it was not mass-produced.

Now these new ribbons allow the printer to print as fast as the black-only printers. The ribbon on the printer only has to shift up and down, so information can be processed as fast as it is received by the printer.

It has been predicted by the vice-president and general manager of Dataproducts Supplies Division, Brendan V. Coyle that within five years at least 50% of the computer printers being manufactured will have color capabilities. "It's just a matter of time before the use of color is widespread," says Coyle.

—Melinda Glass

RISK
Vectrex
TOMYTRONIC
PAC MAN
CHESS
CHALLENGER

ELEMENTS OF STYLE

The Origins of Game Design and Play Themes

By Frank Lovece

Sometimes people forget, but "video games" is a two-part term. Take away the video and you still have games, or organized play. Electronic ones, whether video or not, are of a tradition that spans more than 4000 years, bridging gamers who play Joust today with those who raced through *The Game of Goose* in the 16th century.

The lines are blurring more and more between electronic and traditional games, given the upcoming introduction by Parker Brothers of a computer-game version of *Risk* and an interactive, live-action poker game recently unveiled at the AMOA show. Board games, after all, started out as adult recreation—as did video games. In both cases, younger players didn't arrive on the scene until later. As with video games, too, early proponents of board games extolled the educational benefits. And, like all games, electronic ones would seem to both reflect and influence the cultures that play them.

Just where do electronic games fit into a scenario that manages to include everything from checkers to Russian roulette? And why do some themes seem to play better on a video screen than on a tabletop? Finally, what do traditional games have that electronic versions don't, and vice versa?

Some of the answers may lie in the reasons why ancient civilizations devised games in the first place. "Life expresses itself in action. . . and all play is a form of action," wrote game historian H.J.M. Murray. Howard Morrison of Marvin Glass Associates, a leading toy and game design firm, believes that, "Games are a vehicle to explore a whole range of emotions vicariously, hopefully with no real risk." This seems to hold true. Once the earliest nomadic humans began to settle in villages and could cultivate food, rather than spend most waking moments hunting or foraging, the opportunity for play arose. Since humanity even then tried, as now, to avoid thinking the unthinkable—about their own mortality—it seems natural that amusing diversions from such terror would evolve.

Athletic games were likely the initial entry, springing from both the innate, rough-and-tumble play of children, puppies and other young animals, and from the physical movements of tribal rituals. Leaders, meanwhile, would often illustrate combat plans—as might a modern-day football coach—which warriors probably recreated at home, first out of curiosity, then for amusement. In addition, mystics and priests would often try to divine the future by using arrows and "lots," which were the precursor of dice. In all probability, people began using available objects for playthings (lots, string, pebbles, even the ground for a "board") and more organized recreation and amusement.

The Silicon Valley of the third millenium B.C. had two centers: the Nile River region and Mesopotamia, the land of Şumer which is now part of Iraq. Already, three of the five major varieties of board games we have today were likely being played: war games, race games and games of configuration and alignment.

War games? What about *Space Invaders*? Race games? Maybe a *Pole Position* or *Turbo*. Games of alignment and configuration? How about *Simon*?

Alignment games are those which have you align a given number of objects, as in tic-tac-toe. In the ingenious case of *Simon*, you're aligning sounds and colors in time rather than in space. Configuration games have you start with objects in a particular arrangement, and then ask you to rearrange them into another one, such as *Rubik's Cube*, for instance.

War games come in four main types including battles, such as chess, where you have to capture/immobilize your opponent's forces; blockade games, such as *Go*, where you immobilize but don't capture; territorial struggles, such as *Risk* or *Qix*, where you have to obtain a larger portion of the board than your opponent; and clearance games, such as *Sole Survivor*, where the only moves are captures. Race games, such as backgammon, are those with some sort of track along which your markers advance.

The remaining two types are hunt games—such as *Robotron* or *Pac-Man*, where a large number of men try to immobilize a quarry—and, indigenous to Africa and southern Asia, mancala games, where beans or pebbles are transferred from one hole to another. There can be overlapping between varieties, of course. Backgammon involves immobilization, though a race must be won.

Illustration by Ron Walotsky

In all these things, we can see what historian Johan Huizinga, in a classic work called Homo Ludens, labeled "the impulse to create orderly form." Electronic war, hunt and race games cater to that impulse, whether it means clearing a cluttered battlefield or finishing a race once it's begun. Mancala games do this as well, but are non-existent in the electronic realm, perhaps because they're alien to Western culture. Yet with alignment and configuration games, the quintessence of that impulse, are strangely absent for the most part as well.

After their emergence in the cradles of civilization, games spread throughout the Middle East, to Greece and the Mediterranean islands by the first millenium B.C. From this point they reached Rome, southern Russia and eventually as far north as Scandinavia. By 500 B.C., board games had reached India, where the forerunners of chess were born. Eventually, chess and other board games spread to China and westward to the Persian region. China had developed its own games by the time of Confucius, and later, about 1000 A.D., developed *wei-k'i*, which led to the massively popular Japanese game of *Go*.

The Arab peoples, meanwhile, had adopted board games after the conquest of Persia; the followers of Mohammed then carried games to parts of Africa, and even brought chess to Europe. The Europeans and the African slaves took games to the New World, where the native Americans already had their own. (The only cultures without indigenous board games, it appears, have been the Eskimos and the native Australians and New Guineans, who had string games, such as cat's cradle.)

As games and gaming traveled, with specific rules almost never set down, they changed and became modified, taking on the characteristics of each culture. Much had to do with the times and the surrounding environment. The ancient Egyptians playing *Dogs and Jackals*, a forerunner of the modern-day *Snakes* (or *Chutes*) *and Ladders*, adopted the concept from animals observed in real life. The Baggara Arabs of the Sudan did likewise with a game called *Hyena*.

Interestingly, there have been at least 30 versions of chess discovered so far. In modern times, geographical, political, moral and religious games developed, reflecting such cultural aspects as sea trade (Britain's 1860 *Ships & Commerce* or *Merchants of the Mediterranean*), political events (France's 1791 *Jeu de la Revolution Francaise*), the rise of automobiles (1920's *The Flivver Game* in the U.S.), post-World War II prosperity (*The Game of Life*) and post-Watergate reawakening (*Anti-Monopoly*). "In some cases, such as *Clue*," observes Dave Evancich, Parker Brothers' Traditional Games Production Manager, "which reflects mystery novels, you even have a reflection of a reflection."

That's often, however, about the

closest most electronic games come to reflecting contemporary culture. Born of the computer and pinball's next-of-kin, electronic games have taken on, for the most part, either fantastic themes in keeping with the science-fiction nature of computers (from *Computer Space* to *Star Wars*), or else easily recognizable sports (from *Pong* to *Pole Position*), which aren't really games created for the medium, anyway. There are games very loosely based on movies, of course, but almost nothing reflecting, say, corporate espionage or the advent of cable TV. With the exception of *China Syndrome* and *Reactor* (dealing with nuclear energy), *Journey/Escape* (dealing with rock music), *The Great Wall Street Fortune Hunt* (dealing with stock trading) and a few other such games, aspects of contemporary culture do not much intrude—just as they did not in pinball play, except in terms of graphic influences.

There are, however, signs that this may be changing as the novelty of electronic games wears off and enduring themes may need to come into play. For now, though, electronic games may be not so much a mirror of society as they are a mirror image. After all, consider that even cereal and Saturday-morning cartoons reflect the cultural phenomenon of video games. This is one notable break with game tradition.

Why is this? According to Morrison, perhaps because, "In the early days of video games, graphics capabilitieis were poor, so the easy way out was to go with crazy-looking aliens or sports symbols anybody could recognize. Now, of course, graphics are amazing, and players are getting more and more of what, say, *Donkey Kong* and *Popeye* really are—sort of living cartoons." This relatively recent development brings electronic games a bit closer to the fold.

Putting aside themes for the moment, we can note that traditional games have long been divided into three major categories: athletic/sedentary, skill/change/combination of the two, and serious/whimsical. Like all board, card and string games, electronic games fall into the "sedentary" (non-sports) category. However, similar to sports as well as such board games as chess, electronic efforts are primarily contests of skill. As for the last division, sports are dead-serious contests. Pinball, on the other hand, can easily be seen as somewhat whimsical. Electronic games, however, like their traditional counterparts, can be both. Just stop to consider the heartbeat-thumping fatalism of *Space Invaders* or, maybe more pointedly, *Robotron*, where you have to save your very family from doom.

So far, then, we can think of electronic games, including video, as a type of sedentary skill endeavor that can be either serious or whimsical. There's one unusual aspect though. Almost all traditional, sedentary games, with such notable exceptions as chess and checkers, rely to a great degree on chance. The spin of the arrow or the toss of the dice have been vital parts of games from the outset. The reason for this might well be a product of fate and circumstance.

The first sciences were those of observation rather than experimentation, and early humans readily observed the role that chance or sheer luck played in life. Chance was ascribed to fate, the course of events preordained by the gods. In order to come to grips with such an unaccountable X factor, they devised oracles whom they believed could foretell the future. From the rituals surrounding these beliefs, writes historian Karl Groos, "grew . . . the serious questionings of Fate in the form of oracles, and color is given to the theory by the custom of jesting to the oracle." Murray, writing 50 years later, disagrees, attesting to the mystery of games' definitive origins. Others, however, note that some ancient, "sacred" games eventually turned secular, such as an American Indian game called *sho'liwe*, played initially by priests at a festival of the gods of war, and which evolved into *ta'sho'liwe*, a 20th-century version played, probably symbolically, to forecast war or peace, prosperity or adversity.

Historically, chance has been a significant factor in sedentary games. Yet the fact that electronic games are primarily based on skill—while retaining many other aspects of traditional games—may represent not a break with tradition but an *expanding* of it.

Getting back to game varieties, we can immediately see a paradox. War, hunt and race games, the typical electronic-game categories, have traditionally appeared not just as games of skill, but also of chance or both skill and chance combined. Yet alignment/configuration games, which rely almost totally on skill, are strangely absent outside of a very few games including the popular *Simon*! At first, this seems the opposite of what tradition would tell us.

The confounding factor here relates to one final traditional-game consideration: the limits of time and space. Rough-and-tumble play may continue indefinitely since there's no precise point at which someone "wins." However, virtually all traditional games are limited as to time and space. But the vast majority of electronic games are limited only to space—the video-screen playing field. Play itself is open-ended. As in pinball, you may indeed have a set number of balls, laser cannons or whatever, but a game could theoretically go on forever. In the traditional game of baseball, play is nine innings, or until a tie is broken. Football games and tennis matches are over after either a certain amount of time has passed or a certain number of points have been scored—or, in the case of a tie, after a short, predetermined tie-breaker period. Virtually all games have set limits, based on time, points, or game segments. But video and pinball do not, or have only extraordinary, quasi-limits. This has led, of course, to the often-repeated charge that these games represent Sisyphean, no-win tasks.

Do they? Video game makers, like their pinball predecessors, know full well how much game time is long enough to be reinforcing to players while short enough to be profitable to arcade owners. Home games, at least the better ones, are usually designed to be played longer and more often, by the inclusion of variable skill levels and other enticements. If there's a time limit, say such longtime observors as Ralph Baer, the principal inventor of home video games, it's individualized. "When you win at pinball or video games," he notes, "you beat your own high score. You're not losing. You're competing against yourself." But while all this may be so, the games obviously don't automatically end after you've topped yourself.

There's still the consideration of space, however. This clearly *is* limited, even with video games that have scrolling screens or screens with corridors. The playing area, unlike the playing time, is finite. In the case of video games, the space of the screen takes one other, rarely mentioned yet exceedingly important factor—movement.

"Most studies done of TV and video only concentrate on the content, not the transmission system," declares Marty Perlmutter, producer of the Vidmax Mystery Disc series and a longtime video scholar. "The few that've been done find that, while our brains can process lots of things at once and get bored without new input, the very center of the eye likes things static and unchanging. The video screen by its nature isn't static, though—the light transmissions are constantly flickering, even though we can't consciously see it happening." A seemingly stationary object on a video screen is actually in motion as the image is constantly scanned and rescanned. This is, according to current thinking, just as annoying to the eye as an object that's obviously moving, as well as annoyingly dull to the brain. Movement at least satisfies the brain. And where there is movement in a game, there is the impulse to create orderly form.

A possible answer, then, is that pure games of alignment and configuration without the war, hunt or race aspects may simply be too cerebral and time-consuming to a) be profitable to arcade owners (though of no consequence to home gamers), and b) be inviting to the eye and the brain. Now, this is a major break with game tradition, and one that, as far as video games go, may be inherent to the medium (although some relatively new games, especially home computer versions, do mix cerebral tasks within the usual war/hunt/race form, indicating that this particular break with tradition may soon be healed).

Traditions are living, changing elements, adapting to the needs of the cultures that keep them alive. Game traditions are like any other. Electronic games—sedentary rather than athletic, skill- rather than chance-oriented, limited in space but not in time, composed of three and very occasionally four of the five major game areas, and reflective of contemporary culture rather than reflecting it, except in the broadest way—are, too, like any other. They follow an historical pattern, and don't break away from, but instead expand upon, traditions. And indications are that culturally reflective themes and leisurely, cerebral alignment/configuration games are forthcoming, further reinforcing links with tradition.

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A FIGHT TO THE FINISH

Atari's New Firefox Soars Across The Video Screen

By Roger C. Sharpe

Photo courtesy of Warner Bros.

The advent of laserdisc arcade games held out the promise for more realistic action as well as graphics coin-op players had never experienced before. Already we have seen the likes of such animated adventures as Dragon's Lair and Cliff Hanger, along with Bega's Battle. Joining the ranks of the latest technological wonders came the live action footage of M.A.C.H. 3 and Laser Grand Prix, in addition to the galactic challenge of Astron Belt which started everything off to begin with little more than a year ago.

Much has happened in the intervening months as coin-op manufacturers have endeavored to ready state-of-the-art equipment. And, as we enter into 1984, one of the leaders of the pack might well be Atari's inventive Firefox laservideo creation. Scheduled to be released in the first quarter of the year, the machine is based on the action-packed Clint Eastwood movie and its memorable, aerial battle sequences.

"With the introduction of Firefox, Atari is entering a new era," stated Don Osborne, vice president of marketing for the Coin Video Games Division. "We've used extremely sophisticated video editing techniques to come up with a unique combination of laserdisc and digital graphics. The end result clearly outshines similar entries in the laserdisc game market."

In creating the game, the Atari Firefox project design team was able to view hours of movie footage, some of it never seen by movie-goers, in order to better select the most exciting scenes for use in the machine. The final footage that was ultimately decided upon was then edited and combined with advanced computer graphics before being transferred onto a laserdisc.

The end result, due to a special feature of Atari's laservideo technology, is that the game is able to make fast jumps to appropriate points on the laser disc without interrupting or blanking the action on screen. Once players get behind the controls it's a non-stop fight to the finish as Firefox gives you the chance to test your skills and reflexes.

Besides the striking visual effects on screen, Atari has further enhanced the total involvement of playing Firefox with actual, digitized dialogue from the movie. Taking the role of Major Gant, you'll hear words of encouragement and warnings from Clint Eastwood (over two dozen of the actor's phrases are incorporated into the programming).

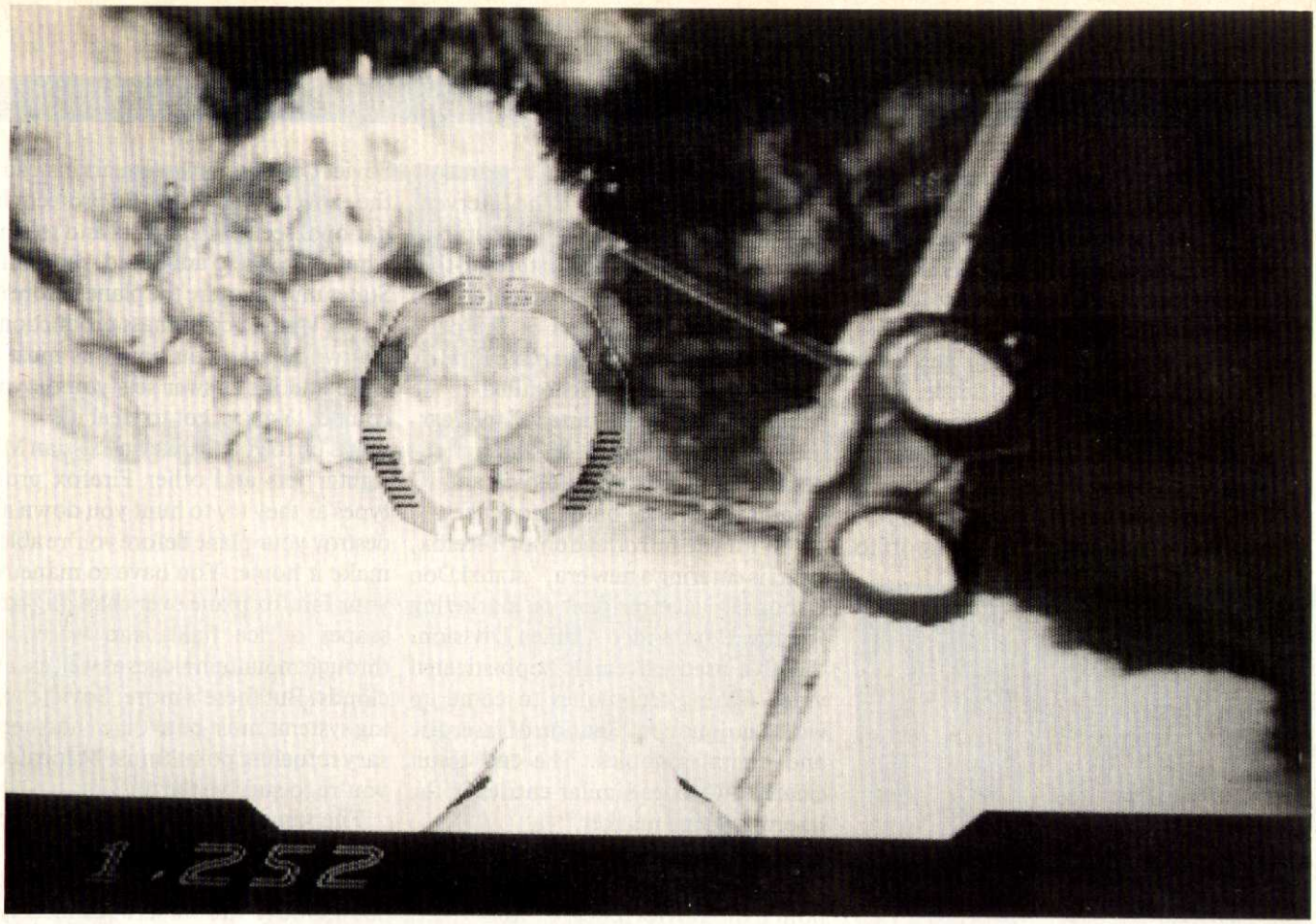
In fact, even before you put money in the coin slot, Firefox delivers scenes from the movie that reveal the story behind your mission. "The development of the Firefox plane has taken the Soviet Union only three years instead of the expected ten years. To protect vital national security interests and to learn what makes it so advanced, the United States must acquire the plane before the Soviet Union begins mass production." Eastwood asks you how this must be done and his answer sets you on your course: 'You've got to steal it.'

It's up to you to take on Russian MIG fighter jets and other Firefox prototypes as they try to hunt you down and destroy your plane before you're able to make it home. You have to maneuver your Firefox plane over changing landscapes of ice fields and water and through mountain ridges as well as thick clouds. But there's more. Soviet tracking systems must be avoided and necessary refueling points must be located if you're to survive the mission.

The same flying control introduced on Atari's Star Wars is present here with dual fire buttons. The trigger switch allows you to fire bursts of cannon-type shells from the Firefox nose, while the thumb buttons operate the launching of one of four missiles for large target destruction. However, apart from the need to master the controls, a crucial element in Firefox is the fuel level of the plane. In fact, verbal cues are provided to let you know when you have to switch to reserve fuel tanks. Additionally, a homing device will start beeping when you're near a fueling station on the ice fields. Make it safely and the wave of play ends while you tank up in order to continue the fight.

While the battle up to this point has only been against MIG fighters, the second wave brings an added menace to contend with—a second Firefox prototype that has the exact capabilities and firepower of your plane. Only a missile can destroy it if you're able to line-up this deadly foe in your sights. Get through this stage and the rounds to follow will feature even more Firefoxes and MIGs to further test your prowess.

And, when the action heats up too much, Atari has incorporated a unique feature into Firefox. There's an instruction film clip which can be activated to let you know when you should move up or down in order to avoid destruction



Atari's Firefox brings big screen excitement down to size for arcade game players as the first laser/movie tie-in to hit the coin-op world.

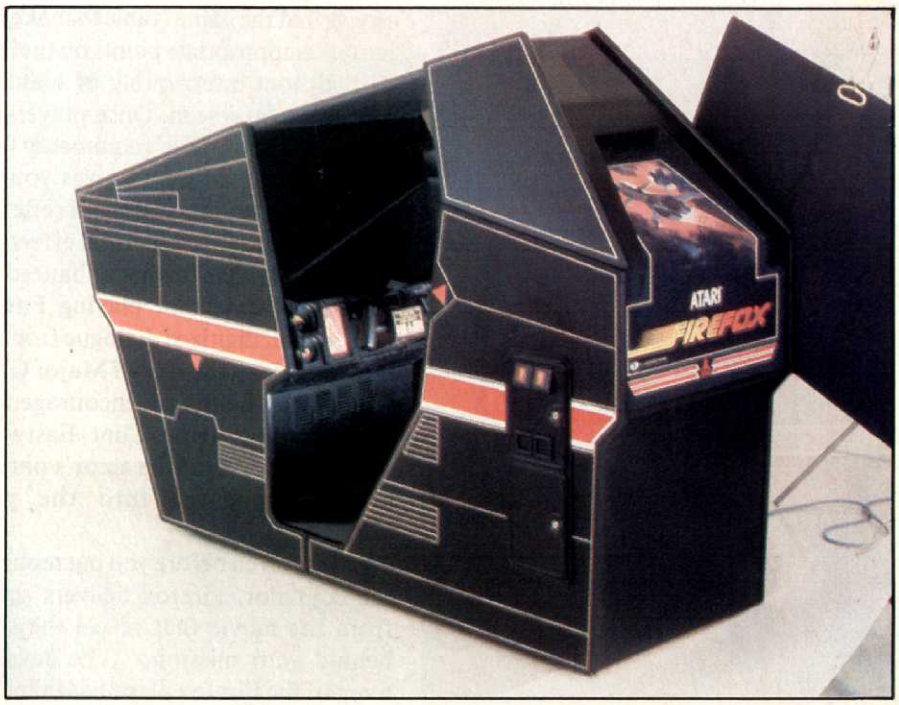
over the mountainous terrain. However there's a price to pay, since using the instruction will cost you extra fuel that you might not be able to afford to lose. The decision is yours.

All in all, Firefox brings big screen excitement down to size for arcade game players as the first laser/movie tie-in to hit the coin-op world. Interestingly, Clint Eastwood had an important role in the development of the game, working with Atari's design engineers and programmers to modify and redefine the final touches of Firefox.

Whether or not these combined efforts will mean success in game rooms across the country remains to be seen. However, the announcement of Firefox along with the capabilities of the available technology, opens up new possibilities for upcoming coin-op games as the laser age saga continues.

Admittedly, we stand on the brink of being offered a remarkable array of arcade attractions which seem limitless in scope. What is true of all the progress so far, in such a short period of time, is that what has been before—all that video has come to represent during a decade of change and development—is only marginally related to what we can expect tomorrow.

These are exciting times for the video game industry and players everywhere with the imagination and ability to stretch their vision of coin-op entertainment are going to experience totally different sensations than has previously been the case. Atari's upcoming Firefox, along with all the other laser game entries, is just the beginning. ▲



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Below, on-screen action with Funai's InterStellar Laser Fantasy. At right, imaginative creations for tots from Kiddie Rides USA.

Below, the return of a classic as Game Plan unveils Sharpshooter II, with improved sound effects and updated graphics.

COIN-OP'S AMOA
Showcasing 1984's Arcade Attractions

by Roger C. Sharpe

All the world's a stage for these remarkable animated characters from Creative Presentations.

Photos by Roger C. Sharpe and Steve Epstein

Now, more than ever before, the coin-op industry has become a study in contrasts. No where was this more evident than at the 35th annual Amusement and Music Operators Association convention staged in New Orleans over the last weekend in October. For four days, one could wonder at the marvels of a seemingly limitless technology alongside creations which owe their existence more to what the spirit of amusement games have been over the past six decades.

At a time when arcade machines have regained a dominant role in the continuing evolution of game design, it was interesting to witness the diversification of products on display as the direction for 1984 became more apparent. After having focused on conventional video games for so long, many manufacturers appeared ready to venture into new areas, even if it meant tapping previously proven formats.

This isn't to suggest that innovative equipment was lacking on the convention floor, however the main emphasis didn't exclude the notion that novelty attractions couldn't have an impact as well. The result was a mixture of high-tech equipment and more rudimentary efforts that added balance along with a broader range of what players can expect in the days and months ahead.

In addition to the impressive array of games and machines on the main show floor, this International Exposition also provided two dozen seminars, workshops and discussions on everything from operating a better run location, to the technical aspects of servicing machines and even how to plan business for the rest of the decade given new technologies and players' changing attitudes and desires for coin-operated entertainment.

But the focal point of the event still remained the opportunity for manufacturers to see what their competition was doing; for distributors to get a close-up look at what they'll have to be selling in the next few months; and for operators to start making decisions about which machines they'll be purchasing to add to their current attractions.

After having endured a rather prolonged slump, the coin-op industry seemed ready to begin the uphill climb with the initial returns of the first laserdisc games providing some hope that better times are just ahead. If there was any reluctance to place total faith in the new technology, it was due more to the cost involved in producing these machines, the price to the distributors, operators, and ultimately, the players, as well as the fear of once again turning all energies to the development of a single category of products.

Most in attendance were willing to concede that the industry had to regain a more multi-dimensional profile in terms of equipment and the results were evident throughout the exhibits. Everything from kiddie rides to skee-ball, shuffle and bowling alleys, gun games, pinball machines, novelty attractions such as robotic characters and biorhythm machines, along with video juke boxes and gambling equipment, not to mention the latest laserdiscs, received a fairly intensive scrutiny.

The general mood was that sellers wouldn't be having an easy time of it as potential buyers were more selective and apprehensive of making commitments without weighing all the options.

With so much importance being directed at laserdisc games, it was slightly surprising that one of the highlights of the AMOA was an extremely appealing video game at the Centuri booth. In fact, Track & Field was the predominant model on display for this Hialeah, Florida-based company. Licensed from Konami, a manufacturer responsible for such past performers as Time Pilot and Gyruss, Track & Field incorporated striking visual details and graphics on screen as well as strong sound effects and a more physically involving style of play action. Featuring six distinctive Olympic events, the game delivers head-to-head competition for up to four players and a challenge of stamina and timing.

Another co-venture exhibited by these two companies was Badlands, an animated western theme disc game which is scheduled to undergo some extensive changes before release.

Over at Atari expectations were high since everyone was prepared to get the first look at this company's entry into the disc arena. Instead, Firefox was present only in spirit as some last minute fine tuning failed to bring the desired results. However, visitors to this booth weren't disappointed when they sighted the three screen action of TX-1. This racing game, under license from Namco, looks to be a fast-paced performer. Another driving creation was the noticeably enhanced Pole Position II and an interesting vector graphic effort called The Adventures of Major Havoc.

Athletic feats with Centuri's challenging Track & Field.

The business of fun and games had become a serious matter for those who might have previously been a bit looser and more casual in their past dealings.

Further affecting the proceedings was the issue of a complex legal battle within the industry which not only added an unavoidable pallor to the daily festivities, but also threatens to rip the coin-op world apart, from the inside out. Fortunately, there were an ample number of distinctive efforts being unveiled which tended to add support to the hope that the best is yet to come.

For those in attendance who might have wanted to sample the most diverse array of equipment around, the Williams area had more than a couple of surprises. Star Rider, an impressive motorcycle sit down 'discan system' game featured some highly innovative computer-generated graphics with realistic hand controls and sound effects to round off the package. Although additional elements of the basic game were still to be added, this first preview was enough for many to judge this as one of the most spectacular efforts around.

Williams also had on display a shuffle alley, pinball machine (Firepower II) and a new video called Blaster from the folks responsible for Defender, Stargate and Robotron. But the most interesting variation on a theme could well have been the inventive Rat Race, a one- or two-player labrynith in a cabinet similar to that featured on Joust pinball. Only this time, the object was to control a single joystick and the movement of a ball around a maze-filled playfield.

Another exhibitor with an interesting mix of equipment was Data East. Bega's Battle, the company's laser entry was in the spotlight, but right along side were a selection of conversions including Pro Soccer, Pro Bowling and Cluster Bluster as well as Destiny, a fortune telling machine. The latter novelty piece was far from alone on the main convention floor as Bob's Space Racers displayed a variety of imaginative creations. These included Super Shifter, a multi-player car racing arcade game, Pattie Cakes, Hot Spot, Bowler Roller and Bully Buster. All seemed better suited for an amusement park setting, but in this day and age, could find themselves being purchased for more conventional game rooms.

Adding more proof to the fact that almost anything is possible in the world of coin-operated entertainment, were the likes of Smaxx, an interesting little two-player boxing game from the same company which brought hockey back to the arcades with Chexx. Also getting attention were gambling games, from more recognizable slot machines to such variations on a theme as Diamond Derby from Entertainment Enterprises which featured a high resolution, video animated horse race and The Laser Shuffle from Status Games. This card game incorporated actual film footage and live actors and actresses, with a more adult flavor to the action, for an effort that could get some play in a home version as well as in the gambling centers of the world.

An SRO crowd checks out the industry's latest efforts for the new year.

Keeping within the selected audience category were an array of games including Ice Cold Beer from Taito, which is being geared for bar and tavern locations (Zeke's Peak is a cosmetically different version of this game for family fun centers) and Bouncer from Entertainment Sciences. This interactive 3-D cartoon featured a full cast of characters and trackball control with the premise being to keep order in each of four different bar settings.

Other manufactures gaining a measure of attention were Stern with a surprising addition to Cliff Hanger, this company's first disc game. Goal to Go was unveiled as a conversion kit for other disc systems and featured live action football footage as well as interactive two-player control and competition. And, undoubtedly due to the success generated by Mazer Blazer at the spring AOE, Stern was ready to follow up with the similar action of Great Guns.

This twin woodstock video gun game utilized a fresnel lens to create the illusion of a 25-inch screen with nine graphically bright scenes for enterprising marksmen to take a shot at. The Bally booth was a showcase for the company's recent acquisition, Astron Belt, a much improved version of the disc game Sega introduced last year, a sit-down racing/shooting effort called Spy Hunter, a new pin-vid hybrid, Granny & the Gators, Discs of Tron and yet another pinball machine, X's & O's.

In fact, pinball was well represented, especially at the Zaccaria display where a visually impressive Farfalla featured a multi-level, jam-packed playfield design and Time Machine showed that it was possible to have a movable section of the board literally disappear from view during the course of play. Another entry, and one that I took personal satisfaction in seeing again, was the reissue by Game Plan of Sharpshooter II. Although the graphics and sound effects have been updated and modified for a new audience, the basic play of the game was just as pure as it had been when the original was introduced over three years ago.

Other highlights of this year's AMOA was the appearance of the Sente booth. Nolan Bushnell's new venture didn't feature any equipment, only the promise of startling developments ahead. Buried into back corners of the show floor were two impressive disc games, Cube Quest from Simutrek and InterStellar from Funai. The former, from a new company to the industry, featured striking cabinet design as well as a 16-channel sound system with an array of effects and synthesized music.

Over at the Mylstar (aka Gottlieb) exhibit M.A.C.H. 3 was getting strong play in both a sit-down and upright cabinet, while a game with exceptional

graphics was becoming a possible sleeper of the show. Exidy's Crossbow is an adventure shooting game with eight dazzling, high-resolution scenes and play appeal that might lead this effort above much of the competition.

Meanwhile, at Cinematronics, the single company which started the laserdisc explosion in 1983, Dragon's Lair was on display and the much anticipated Space Ace from Don Bluth, although not on the floor, was getting private screenings from select industry individuals. The advanced word coming back leaves no doubt that the Cinematronics/Starcom/Don Bluth connection is a power to be reckoned with.

And so it went for an extravaganza that leads the way for coin-op into 1984. The surprises were many and the promise for players is that the games coming up are the strongest and most diversified in the industry's long and rich history. The coming months will prove just how close this appraisal is as arcade '84 takes off.

An Insider's Report

I'm an owner and operator of an amusement center in New York City and have been involved in the coin-op business for twenty years. For me the industry's annual fall extravaganza has become an important event where I can preview, firsthand, those games I'll be seeing at my local distributor's showrooms during the next six to nine months. Getting an idea now of what to expect, will help me plan and prepare for which models I'll want to purchase as well as determining, from the machines I already have, those which might still have life against the new competition.

Another aspect of the convention is that, as I walk from one booth to the next and one manufacturer to another, I can get a sense of what the upcoming trends and design directions might be. In an industry which has undergone such remarkable change in the past few years, observing everything under one roof and what the different reactions are to specific machines, has been an invaluable aid.

But maybe what I enjoy the most about the show is that I have the opportunity to meet face-to-face the individuals responsible for the products being built. In this setting I'm able to discuss what certain games may be doing at my amusement center, what my problems might be in terms of maintenance and reliability, whether I can have more options in setting a machine for scoring levels and difficulty of play action to better suit my customers and what my players seem to like.

I suppose that since I know my regular players so well and take the time to talk to them about their favorite machines, or what they'd like to see in a game, as well as the fact that I'm a player myself, probably gives me a better vantage point, compared to other, less involved operators, for expressing my feelings about various elements of the business. This might include everything from game pricing to the durability of particular joysticks, or the game design itself and why it is successful or the reasons why it failed.

The one thing I've always believed is that my business is to provide people with an entertainment option other than movies, a Broadway show or a number of different activities. And the value of that entertainment is something I've been sensitive to over the years, whether it's exemplified in how I set my game limits or the continual battle of keeping game pricing down to a quarter except for those rare occasions, such as the new disc games, where I'm forced to go to 50¢ play.

It was in 1977 that I attended my first AMOA convention. Before this there was really no need since restrictive legislation regarding coin-operated games in New York City, pretty much decided what I could get and what I couldn't. But when the city opened up its doors to a full range of amusement games, my attitude and enthusiasm quickly changed. In the ensuing years I have approached each convention with the same sense of excitement and adventure as my first trip.

This time around all attention was obviously focused on whatever laserdisc games were being displayed. Given the success and interest generated by those few models which had already been introduced just a few short months earlier, it seemed only natural that they would grab the spotlight. However, what impressed me more as I walked the floor of the convention was the rather substantial amount of non-video games being exhibited.

Finally, after a lengthy period of time when all manufacturers seemed intent on only creating a single product category, which had become stale from the similarity of so many different variations on the same theme, there was a definite awakening to the fact that coin-operated games could take on a variety of forms. I must admit to having considerable concern that this would ever be the case again and had watched, almost helplessly, as my business slipped away from players growing tired and disenchanted with what was being released.

Suddenly it appeared as if the apathy expressed by the playing public in terms of reduced earnings around the country, was being heard and the companies were once again willing to try different inventions to draw people back in. There was an overall commitment by those manufacturers I talked to regarding better product quality and more appealing game play as well as improved cosmetic effects.

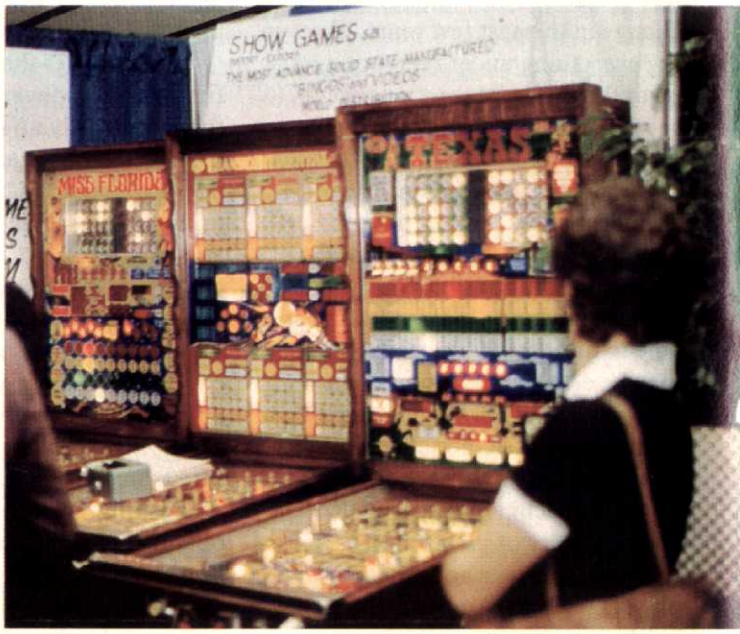
The days when the industry seemed to be standing still were over, replaced by a renewed sensitivity that today's player deserves more for his money. New technologies and applications are waiting to be tapped which may well alter what arcade games have been before. The 35th annual AMOA stands as a turning point in the ongoing evolution of the coin-op industry. All that remains is to see what happens.

—Steve Epstein

Innovative Concepts in Entertainment hopes to knock 'em out with Smaxx.

It's a test of strength against the armed force of Mr. Muscle.

Exidy's sight for sore eyes is the graphically impressive Crossbow.



Having a ball with the odds-on entertainment of bingo machines.

Flipping out over the revolutionary design of Time Machine from Zaccaria.

Taking a whack at the new breed of novelty arcade equipment.

Above, there's martial arts fun against Mr. Jolt.

Below, Zaccaria's Farfalla.

A galactic long shot features some variation on an old theme.

Players are on the firing line with the action of Caribbean Pirates.

FIRST IMPRESSIONS OF A SINGULAR EVENT

By Steve Harris

It was last Halloween weekend when manufacturers, distributors, and operators from around the world, gathered together and headed for the Mardi Gras town of New Orleans. The big event that brought the main powers of the arcade industry to Louisiana was the Amusement and Music Operators Association's (AMOA) show. This annual event, traditionally held in Chicago, showcases the manufacturers' latest offerings to the public. More importantly, the new games and game-related items are shown to the distributors, who buy, and in turn sell to the operators, who place the new machines at your local arcade. Therefore, what your neighborhood arcade owner saw, is what you're most likely to be playing in the next few months.

After entering the enormous Rivergate Exposition Center, I fought my way through the crowds at the registration booths and finally entered the main auditorium, where I was greeted with a barrage of wonderful electronic sights and sounds. I had just entered the largest arcade in the world, and every game was on free play. I walked through each exhibit, trying all the games, both old and new. Invariably, I picked up literature about every machine, each manufacturer proclaiming their games to be better than the rest.

The overriding theme of this year's show was undoubtedly the latest laserdisc games. This fledgling technology employs the use of a disc player to produce movie-quality images which are then projected on the screen. Depending on the actions of the player, the disc either shifts to a new scene if the appropriate moves are made (as in Dragon's Lair) or it (in correlation with the computer) creates new enemies and targets. This is done in an effort to create true interactivity between the player and the film.

The most awaited of all the new laserdisc entrys had to be Atari's Firefox. Based on the Clint Eastwood movie of the same name, the Firefox portion of this company's booth was extremely crowded on the first day of the show. Rumor had it that Eastwood himself would make an appearance. Unfortunately, the actor never appeared, nor did those in attendance get a chance to sample the Firefox game itself. It seems as though Atari attempted to preview the machine before it was actually completed. The rush job failed and the corporate decision was to hold back on showing any footage. As for Eastwood, one assumes that his airline ticket and accomodations were cancelled.

The best of the laser games had to be Star Rider from Williams Electronics. In this futuristic racing game, you hop aboard a motorcycle, literally! The cabinet is shaped similar to a cycle, with controls identical to the real thing. The game consists of 4 tracks with such names as Cubatonia and Hexagonia. The film is much like the computer animation of Tron; and Star Rider is the first driving game ever to include a working rear-view mirror! Although the version shown was not yet complete, (the finished machine will include enemy riders, trying to knock you off the road) Star Rider was one of the unexpected surprises of the show.

Another laser game getting a great deal of attention was Mylstar's M.A.C.H. 3. Although the game play was nothing new, the impressive background film drew people in. Soaring through canyons, over lakes, and other types of terrain, your mission is to blow up enemy bases while avoiding their return fire. By and large the general consensus was that the stand-up model was superior (largely due to the inability of spectators to view the large screen sit down machine), although many felt that M.A.C.H. 3 was a regression rather than a step foward. The problem might well stem from the fact that it's flashy, but it's still just a shooting game.

Stern's Cliff Hanger was on display and received mixed reviews. Introduced as the second totally animated laserdisc game, Cliff Hanger places the player in

Williams Electronics packs them in to sample a diverse array of games.

several hundred different life and death situations. Like Dragon's Lair, only one correct path exists through the dangers and if an incorrect move is made, one of your men dies. Although it is evident that Stern has tried to capture the excitement of Dragon's Lair, the Saturday morning animation, as well as the lack of control continuity, has greatly hampered their effort.

Over at the Bally exhibit, the original was finally being shown. Astron Belt, the game which revolutionized the industry and made everyone aware that laser games were here when Sega unveiled it last year, had a large audience. In reality Astron Belt is very similar to Mylstar's M.A.C.H. 3 (or is that the other way around?) being a moving and shooting game that takes place in outer space. Astron Belt would have, without doubt, been an instant hit one year ago. But today, with the competition of the other laser games, it might just be passed up. Time will tell.

Other, less noticeable efforts into the laserdisc field included Laser Grand Prix, by Taito. Similar in concept to Pole Position, this game used filmed footage of the race course rather than a computer generated track. Bega's Battle, the first disc game by Data East, leads the pack in terms of game play, but the disc backgrounds have nothing whatsoever to do with the game itself. (It could just have as easily been done with a conventional computer background.)

Cube Quest from Simutrek, a new company on the scene, closely resembles Tempest, with a movie backdrop. The spiralling images created by the disc, however, produce a strange, dizzying effect. With a little bit of retouching, this initial effort could be a winner. Badlands, by Konami, another last minute surprise to the laser sweepstakes was decent purely as a reflex tester. However, as a game, it was a dud. By reacting at appropriate times, you must shoot at various bad guys who are intent on finishing you off. A football game by Stern called Goal to Go supplied some live action footage and several card games rounded out the selection of laserdisc games.

Where the disc games might have lacked an appreciable amount of game play, the "conventional" computer-generated video games introduced quickly made up for this deficiency. While traditional gamers are less flashy, they are open to a larger number of options, as well as scenarios. Every new game will undoubtedly have to be better than a disc game's appearance or it will be passed up, and, unfortunately, many of this show's entries will be.

Due to a lack of new themes, many of this year's selections may never be seen.

All geared up for high speed excitement was Taito's Laser Grand Prix.

The best of the laser games had to be Star Rider from Williams. In this futuristic racing game, you hop aboard a motorcycle—literally!

There were still a number of worthwhile games, though, that utilized ideas, both old and new.

Bally showcased Jr. Pac-Man (I wonder just how far they can carry this moniker) in both a regular model and as a conversion kit for old Pac-Man and Ms. Pac-Man machines. By combining most of the characteristics of their previous winner, Ms. Pac-Man, and throwing some new ones in to add interest (a scrolling maze and exploding fruit), Bally has produced yet another winner. Also present at the Bally display were several Discs of Tron, a Professor Pac-Man, (probably the only Pac-Man machine that never succeeded) and a new sit down driving/shooting game titled Spy Hunter.

Atari debuted several new games that kept the disappointed Firefox fans, (including this one) busy. The most incredible of all their new offerings came from Tazmi Electronics of Japan. Called TX-1, this was a driving game par excellence, incorporating three separate monitors, for an almost true-to-life "windshield" panorama for the player. While the game play is very similar to Pole Position, the incredible sensation given by the enormous field of vision has to be seen to be believed.

While talking about car games, Atari also unveiled Pole Position II. Being sold solely as a conversion for regular Pole Position machines, this sequel provides the player with a choice of four different tracks as well as some graphic enhancements.

Completing Atari's exhibition were Major Havoc, a rather muddled, vector graphic, science fiction shoot'em-up/maze game, and several Crystal Castles and Star Wars machines.

Williams showed once again that they could create another extremely fast intergalactic conflict. Blaster, designed by Eugene Jarvis and Larry DeMars, the creators of Defender, Stargate, and Robotron, was a rather abstract game, challenging players in a first person (head on) perspective, to shoot aliens and asteroids in an effort to reach Paradise. Rounding out their presentation, Williams also showed Motorace USA, a motorcycle game introduced earlier this year.

Centuri/Konami presented their joint

Having converted over so many already, Universal was back with Mr. Do's Castle.

Highlighting the Data East exhibit was the laser game adventure, Bega's Battle.

effort,Track & Field in a booth that featured over three dozen of these games in both upright and cocktail models. Complete with 6 different Olympic events (100 yd. dash, long jump, javelin throw, hurdles, hammer throw and pole vault), Track & Field was a nice change of pace. It's a colorful and beautifully executed game with a four-player option for added competition between players.

Over at the Nintendo booth, I approached their latest Donkey Kong game, Donkey Kong 3, with a fair level of excitment. Further continuing the now famous saga, DK 3 was a rather bland effort. In it, players must 'spray' Donkey Kong to the top of the screen with a smoking spray gun. Aiding the simian in his survival are a slew of bee-like insects intent on stinging the on-screen hero, Stanley. Beyond this dull premise, Donkey Kong 3 offered little more. After doing the same thing over and over again, I walked away disappointed.

At the adjacent hallway of the Expo Center, away from the main manufacturers, Sente Electronics still had nothing in the way of arcade games to show. With a large crate marked, "Don't Open Until December 9," Nolan Bushnell's latest company continued to build up excitment for this as yet uncompleted technological achievement in video games.

Other games included Bouncer, by Entertainment Sciences, that had the best graphics I've ever seen. Hoccer and Dinosaur by EME and Skelegon and Radical Radial by Nichibutsu were also impressive looking although one wonders about the impact these games might ever have in the marketplace. Another theme of the show was the introduction of both good, as well as extremely cheap, conversion kits. Allowing an operator to replace an unproductive game by merely changing the p.c. board, conversions seem to be a new light on the horizon.

Universal had the largest conversion kit exhibit with their new Mr. Do adventure, Mr. Do's Castle. A sequel to the original Mr. Do, this version offers an even larger number of different play themes.

Another good conversion was located directly opposite of the barren Sente Booth, Marvin's Maze, by SNK Electronics, brought back several classic themes in a colorful 3-dimensional perspective, which reminded me of Q*bert. One original aspect of the game was that each board is comprised of *two* different mazes linked together by four elevator-like tubes.

Besides new video games, several manufacturers had pinball machines and other non-video related games. Bally was showing off Granny and the Gators, a video-pinball combination which was a follow up to Baby Pac-Man. Other pinballs included X's and O's, also by Bally, Ready. . . Aim, Fire from Gottlieb, Firepower II by Williams, Sharpshooter II by Game Plan and Zaccarias' Farfalla and Time Machine.

Some of the more unusual efforts included Rat Race by Williams, where you actually tip the board to control the ball (no tilt!). Another game of ball control was shown by Taito. Their Ice Cold Beer game was billed as the first exclusively made for the bar and tavern trade. Also on display were the Chexx inspired hockey games, and a number of video juke boxes, showing some of the latest rock videos.

All in all it was a worthwhile weekend, although it was a somewhat uneventful showing of new laserdisc and conventional computer games, there were a few bright spots. However, any way you look at it, it's an experience to remember.

Reflections on the AMOA

The Amusement and Music Operators Association (AMOA) held their annual convention in Cajun country, New Orleans, Louisiana. Traditionally held in Chicago, over 8,700 people registered for the three-day event to gaze at the newest in coin-operated amusement machines.

Before the show, there was a mad scramble by nearly every major manufacturer to have ready a laser game of some type. Unfortunately, after seeing the equipment on display, there was no need for the great hurry.

The coin-op amusement industry has been dealt some serious blows, with everything from legislative problems stemming from exaggerated, wildly inflated earnings figures, to poor quality, expensive equipment, (many machines are sitting in warehouses collecting dust, not quarters) sagging collections, and bad publicity as parents and civic groups forget that they were young once.

Many newcomers who viewed the coin-op amusement industry as a way to make some quick, easy money soon learned that it was a lot of work and far from easy. These people leaving the industry has been referred to as 'the shakeout.' Not only did operators move on, but some distributors and manufacturers could no longer compete and were forced to sell out.

Those who have survived the barrage of hurdles, are now preparing for the future and came to the AMOA hoping to see some sensation that would help them get back on solid ground (equipment that they could see their return on investment). They figured that phenomenon would be laser games but were soon to realize that laser was not going to be the instant miracle to bail the industry out of its slump.

Dragon's Lair, the first laserdisc video game by Cinematronics, received an incredible amount of publicity, arousing interest in this new technology. Players who seemed to have strayed from the arcades were once again reappearing to play this new wonder of laser games. Operators hoped that players would come to play laser and stay to play other games. Players, however, yearn for something exciting and unique, but very few games that have been different have kept players riveted to that screen indefinitely.

As with many fads, with success comes many who would take that success and milk it for all it is worth. Don't we all remember the CB radio. Everyone had to have one and before you knew it there were more available than you ever throught possible. Hand calculators blanketed the world with as many different brands, sizes, and kinds than were imaginable. But soon after, interest plummeted.

So it is with the coin-op industry. It is commonly called the "Hit Syndrome." It has occured in the past; an example was space games. With the introduction and success of Space Wars, Space Invaders, and Asteroids, space games became what many termed a sure winner, and the industry was deluged with variations on the theme. Even players, once loyal to those games, felt they could take no more.

Then Pac-Man brought into the market a new type of video game—the cute game. And, as with space, cute games became what was successful as all manufacturers tried their hand at some type of 'cute' theme. And players pledged alligiance to cute games until they were drowning in cute characters and cute video worlds.

Laserdisc games, though being released in different themes, seem to be falling into the hit syndrome since manufacturers have gone to great lengths just to have a laser game in the marketplace.

Late in the summer, Bally Manufacturing bought a major manufacturer, Sega Electronics, to obtain the rights to Sega's laser game, Astron Belt. Sega had exhibited Astron Belt at last year's AMOA amid excitement from industry members at the new technology soon to be available.

However, before Sega could put Astron Belt out, Cinematronics, operating under a Chapter 11 of the bankruptcy code introduced Dragon's Lair at the Amusement Operators Expo (AOE) this part March. Though it was only a prototype, Cinematronics managed to deliver Dragon's Lair during the summer. Although there were problems, the results were obvious; that laser was a direction in game design to be reckoned with. Interestingly, the major problem involved the laserdisc player produced by Pioneer. The machine was originally designed for limited, at-home use, and no one was prepared for the extended play the game received. Yes, video fans flocked to arcades just to play Dragon's Lair.

The games tended to overheat, causing Pioneer and Cinematronics to go back to the drawing board and design a more adaptable player which has been done on Dragon's Lair games coming out after the middle of October.

Laserdisc had been called (maybe more hopefully than anything) the savior of the industry and operators waited patiently to be able to purchase one of these marvels, holding back from purchasing anything else.

Everything they always wanted to know about lasers was at the AMOA show, as well as much they didn't want to know. Most of the lasers were unimpressive and underwhelming. The cost is high and the reality is that there will have to be an awful lot of quarters dropped into these games to break even, or, if lucky, make some sort of a profit.

One of the laser games at the AMOA included *Astron Belt*, a space game by Bally. Though Bally made some minor changes on the game after purchasing Sega, operators were generally less than raving about it.

Cliff Hanger by Stern is a cartoon laser and drew more criticism about a death scene wherein a silhoutte of a man hanging is shown for several seconds. Realizing it was a problem, Stern printed up circulars explaining that the hanging scene could be eliminated through a switch.

Stern also introduced another laser called Goal to Go, but I'm afraid this

game will never attain its goal of appealing to many players. It has film footage of a football team and after the ball is down, choices appear on the screen for the players to make in order to continue the action.

Centuri is licensing a laser from Konami of Japan called Badlands. This is a cartoon laser that drew little attention and was nothing more than a response game.

Several new manufacturers also exhibited lasers including Simutrek with Cube Quest and Funi Esp. which displayed Interstellar Fantasy.

Atari, assumed by many to be at the show with an impressive laser, were only able to look at the cabinet. After two attempts to install a laser player into the game, Atari realized they would not be able to have the Firefox working and even the rumored appearance of Clint Eastwood never happened.

Williams displayed Star Rider though the game was not complete at the time. The graphics needed work but the game was a very popular one and may be one of the better lasers to come out. The player uses a steering assembly similar to a motorcycle to guide his vehicle along a course of computer generated graphics.

Mylstar (previously D. Gottlieb & Co.) showed M.A.C.H. 3 and found positive response from operators. This game has film footage of mountain terrain and the player maneuvers his plane as he shoots computer generated targets.

Driving games generally do very well and Taito exhibited a laser driving game called Laser Grand Prix.

This year's AMOA show was different for one reason I was keenly aware of. In the past, by the first day there is at least one or two pieces of equipment everyone is talking and is excited about. Q*bert was the game last year along with Pole Position. It has been that way every year. This time around, however, operators tended to point out which games weren't quite bad rather than those which were very good.

Though the lasers were the most sought after machines, most were disappointing. Other games that were shown, which could be considered the hits of the show, included such entries as Ice Cold Beer by Taito. This game is one of my favorites and should be a steady earner. The interest in this mechanical effort should stay high because there is no pattern of play. It's an upright board (about the size of a video game) with holes that light up. The player lifts a steel rod with a ball resting on it and tries to make the ball fall into the hole that is lit up. This is a game that players of all ages should enjoy for a long time. There is a version called Zeke's Peak for arcades where beer would not an appropriate theme.

Track & Field by Centuri comes out when everyone is very Olympic-minded. This video game allows up to four players to compete in various categories—track, javelin throwing, etc. It's a fun game many will enjoy because there's a physicality to the play which has been absent in so many video games.

Crossbow by Exidy drew many positive comments. It's a high resolution, expanded memory video game. What this means is that the memory is greatly expanded allowing more realistic images to appear on the screen. In simplier terms, there are more dots on the screen making the images appear more realistic. The player shoots a crossbow, mounted on the cabinet, at various video screen targets on a variety of different screens.

Bouncer by Entertainment Sciences is another high resolution graphics game. Operators questioned the need for such expanded memory for this game, but the theme is great. The bouncer in the bar tries to throw out the bad characters who are intimidating customers, while attempting to keep the customers happy, in this almost cartoonesque effort.

A trend carrying over from the AOE show in the spring, which was also true at this show, was that novelty games are attracting players. Chexx, the hockey game by I.C.E. was an overwhelming success at the AOE, and going back to our hit syndrome discussion, this show had several hockey theme games quite similar to *Chexx*. Other novelty games from the Norton Company such as Happy Feet, Happy Hammer and High Ball drew a great deal of attention. Bob's Space Racers has had tremendous success with its Whac-A-Mole game and other novelty pieces.

Foosball, pool tables, shuffle alleys, and bowlers are also making a comeback. With the onslaught of video games, other types of equipment were shoved aside for the past few years as operators looked to the short term high earnings of video games. With video being so risky, however, operators are once again going back to the faithful, steady earning pieces. Pool leagues and foosball leagues have helped generate new interest. Even pinball machines are showing that players are coming back for innovative flipper action.

—Valarie Cognevich

The focus was definitely laser at the Stern/Seeburg booth.

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Arcade Games

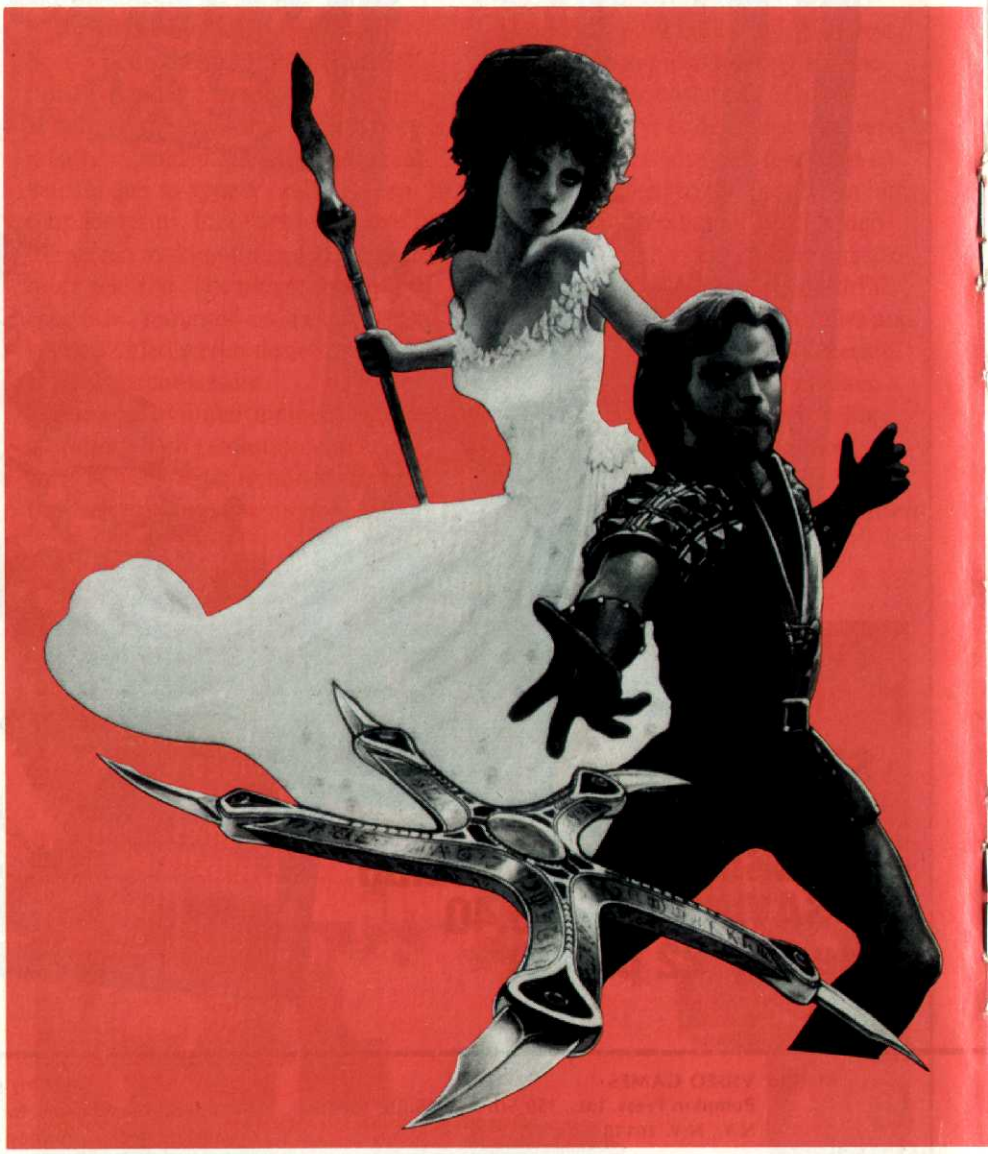
Playing Tips and Strategies

By Steve Harris

KRULL

Krull from D. Gottlieb and Company (a.k.a. Mylstar) could be better described as another Tron. It's a movie-based game which follows the story of the motion picture with four, or in this case, five separate play themes, each one entirely different.

In the game you assume the personage of the warrior, Colwyn, who is out to save his princess and bride-to-be, Llyssa. Standing in his way are the evil Beast, and his legions of malevolent assassins, the Slayers. Colwyn must form an army to confront the Beast while using his only weapon, the magical glaive, to eliminate the Slayers and defeat the Beast. In all of the five screens you're depicted by a small figure (Colwyn) which you control with an 8-way stick. Every screen but the first allows you to fire up to four of the star-shaped glaives (via a joystick control as well) to destroy your opponents. When a glaive is shot it follows its initial trajectory until it either strikes an object or the side of the screen. Once it hits the target it rebounds and bounces back into the hands of Colwyn.



On the first board Colwyn must assemble the glaive by picking up the five sections of the star which are scattered about the screen. For every piece Colwyn retrieves 1,000 points are credited to your score. As Colwyn begins to pick up the pieces of the weapon, an enormous rock slide will be triggered, making your attempts to assemble the glaive even harder. If a boulder dislodges Colwyn's foothold, he will be crushed, but points can be scored by running just ahead of the rocks. Once all five pieces are collected, the second round begins.

Colwyn's mission in the second phase is to gather an army before being killed by the sinister Slayers. The rounds begins with 8 troops and for every troop in the army rescued, 1,000 points are

awarded. The Slayers appear from the ground and attempt to eradicate Colwyn and his army by touch or with their laser spears. The Slayers can be destroyed with the glaive for 100 points each. When a Slayer is killed another will take his place until the last member of the army is saved. The enemy will continue to advance until the last one is destroyed, ending the round.

The third screen begins with Colwyn situated in the lower left-hand corner. This board is much like the previous one except that each member of the army must be led to a floating Hexagon. For every troop successfully moved to the Hexagon, you receive 1,000 points. once all the soldiers are safely in the Hexagon, the remaining Slayers automatically die and Colwyn is transported to the fourth stage.

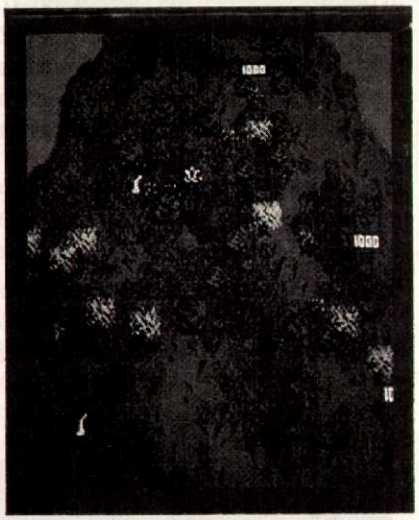
Here, Colwyn is in front of the giant Hexagon. At this point the object is to break down the front of the structure with the glaive to free your army. The walls of the Hexagon can only be destroyed when they're colored black. If a glaive is thrown at the building when it isn't black, it will stick. It won't return to Colwyn until the face of the Hexagon is black again. Slayers will appear if too much time is taken in breaking down the walls. They will attack until your army is freed from the Hexagon, at which time the round ends.

The fifth and final scenario pits Colwyn against the most dangerous of all his foes, the Beast himself. You must reach the top of the screen where Princess Llyssa awaits before Colwyn is killed by the Beast or the fireballs he shoots. Although he cannot be destroyed, the Beast can be stunned with the glaive for 100 points, and the fireballs can be eliminated for the same amount. The Beast will continue to launch fireballs until Llyssa is reached. When you finally make it to the princess, your army will appear and chase the monster off and give you 1,000 points for each remaining soldier. The game then starts over with round one, but at a higher level of difficulty.

Strategies: Krull is largely a reflex game. The higher the level you achieve, the faster the enemies move and the faster your reflexes need to be in order to survive. Knowing where to be, and when to be there are essential strategies for Krull. Although there are not patterns, there are systems which can allow you to play as long as you want.

Screen One, The Boulders: This is the easiest of all the boards. Despite the fact that the boulders become faster at higher levels, the basic pattern outlined below will work at any difficulty.

You'll notice that the big boulders roll



down the left side of the mountain and most of the small ones go down the right side. Though the larger ones are faster, the small rocks are harder to run through since they're closer together.

With this fact in mind, run and grab the first piece of the glaive to the right. In most cases a second section will be somewhere above the first; secure it and head toward the next piece. Almost always the third part of the glaive is at the top of the screen. Wait for an opening and pick it up, then immediately start back down the mountain. Avoid any of the fast boulders and snatch the remaining sections of your weapon.

On the first level the rocks don't speed up unless you take too long in picking up the 5 blades. Use this 'spare time' to gain extra points by gathering up all but one section of the glaive. Get ahead of a large rock (they award more than the small ones) and lead it to the lower part of the mountain. When you get near the bottom, run around the stone and proceed to the top to step in front of another rock. When the boulders begin picking up speed, retrieve the last section of the glaive and end the avalanche.

Later levels begin with faster boulders, some of which lock on to Colwyn's position and follow your movements right and left. Move far out of their way to escape them. Besides this, nothing else significant changes.

The Second Round has two strategies, both of which affect the outcome of later boards, in different ways.

The more rewarding method is to shoot the Slayers and grab as many members of your army as possible. This will not only end the round sooner, but you'll receive additional points as well. The one negative aspect in doing it this way is that you have to lead more men to the Hexagon in round three. (For every army member you save now, an equal number must be rescued on the third board.)

The second system involves not picking up your army at all. Instead, avoid the men as they approach and let them get zapped by the Slayers. Although it will take longer to complete the screen, (you'll have to wait around for your army to get knocked off by the enemy) and your score won't increase as rapidly, it will make round three much easier, requiring you to send only one man to the Hexagon.

With either method used, stay near the bottom of the screen. The Slayers will materialize in the left and right corners, as well as above, so don't fire all four glaives at one. Keep at least one of the stars in reserve, in case a Slayer appears nearby.

At the outset of this stage retrieve as many soldiers as possible before the Slayers appear. When the enemy attacks, head for the Hexagon and deposit your troops. (If you're killed before you reach the Hexagon, every member you picked up previous to Colwyn's demise must be recovered again.)

Avoid the center of the screen unless absolutely necessary. There are many lo-

cations near the middle part of the board for Slayers to form. It is also very difficult to maneuver within the rocks;

often you'll get stuck and a Slayer will blast you from behind.

Stay in one corner and let your army come to you. Eventually the men will come near your position. If you need to move to a different corner, run around the center to pick up the men.

Sometimes the Hexagon will get trapped in the lower right corner. If this happens, run to the Hexagon and release the men you may have picked up, then continue the round as normal.

Like round 2, this screen picks up speed on level 3, and reaches its ultimate speed on level 7. The ease of the third board is, as said before, a direct result of the playing strategy used on round two. The more soldiers there are to take to the Hexagon, the longer it will take to finish. The longer it takes to finish, the faster the Slayers become, so be cautious.

Round 4 is very easy on the first few levels, requiring you to do nothing more than wait for the correct time to fire. In later levels the Hexagon begins changing colors very quickly, and, with the addition of Slayers, it becomes quite difficult to concentrate on the Hexagon's color while avoiding the Slayers and their lasers.

On all levels start by approaching the front of the hexagon. Watch the outside of the building to determine when the wall will turn black, then fire at the Hexagon.

On levels 3-6 the Hexagon will begin to speed up. Slayers will also be present, so alternate your attention from the slayers to the Hexagon. Make sure no Slayers are near you, but also make sure that you hit the front when it's black.

Levels 7-9 are where the next major increase in difficulty occurs. The Hexagon will be moving quite fast, and the Slayers will have reached their maximum speed. Always make sure you have at least one glaive in hand just in case one approaches.

In later levels, when the Hexagon begins moving quickly, (Level 10 on) avoid the Slayers and shoot all four glaives immediately at the fortification. Since the colors change so rapidly, one of the glaives will hit the building when it's black and simultaneously send the stars back into your hand.

Again, fire all four glaives to destroy the second, third, and fourth walls. To eliminate the threat of being hit by Slayers, move side to side to dodge their spears. If one of the Slayers gets too close, blast it; otherwise, concentrate your efforts on the walls.

Board 5, The Beast: This screen is

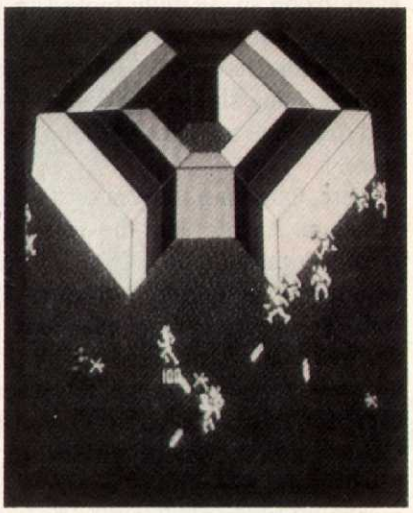
simple once you know the correct path to the Princess. This pattern will work on all levels of play.

To begin, run straight ahead towards the Beast. The monster will fire several fireballs at you, but shoot only those which have a straight, vertical trajectory. As you near the Beast, run to the right and fire twice to your left as you pass. Next, head straight to Llyssa at the top of the screen. When you get close to the Princess, several fireballs will be rising toward your position from below. Shoot downward while running forward to complete the screen.

The only change in later levels is that the Beast shoots more fireballs. However, all you have to do is use the same method outlined above to finish.

After the Beast exits the screen, you'll receive your bonus points and be transported back to round 1 to start again.

Krull is an inventive (but not revolutionary) attempt to recreate a movie's excitment with you starring as the main



character. With the introduction of Krull, as well as Star Wars and Tron, the industry is well on its way to seeing more video game adaptations of blockbuster movies.

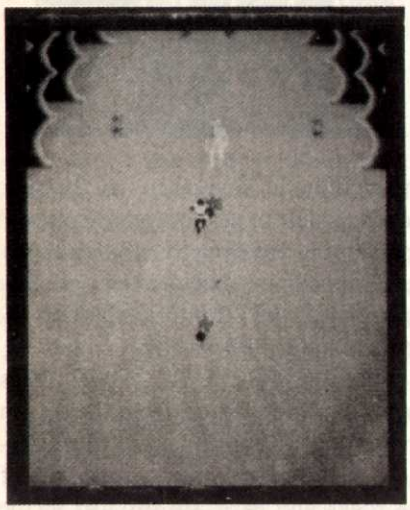
Trick Tips: There exists in Krull a way to get unlimited men, as well as an infinite score. You can play as long as you wish, with your only barrier being your stamina.

When you confront the Beast, on the fifth board, you'll notice a set of caves on the right and left sides of the board. As the round begins, get past the Beast and position yourself in the second cave on the right. You may have to shoot some rising fireballs to get there, so be cautious.

Once in the cave, fire to the left whenever a fireball nears. The Beast will advance slowly and continue to fire his projectiles. The fireballs, trying to lock

on to your position, will end up getting stuck in the cul-de-sacs of the cave, and in the corners of the screen. With this danger out of the way, the only menace becomes the Beast, who will walk slowly toward you in an attempt to kill you. When the Beast gets very close (about an inch away) fire your glaives. Not only will this stun the creature, but it will also award you 100 points.

An extra Colwyn is usually awarded at 30,000 points then every 50,000 point level after that. By firing all four glaives constantly at the Beast you will receive a bonus man about every 1-2 minutes. (The closer the Beast is to Colwyn, the faster the score rises.) Just remember not to stop firing at the Beast once you have him in this position or he will

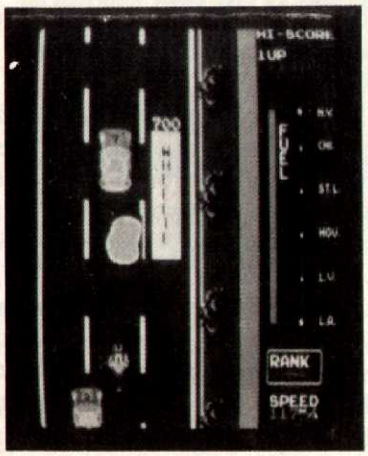


become un-stunned and try to walk over you again. As long as you keep the Beast stunned you can use this trick forever or until your arm wears out, whichever comes first.

MOTORACE USA

Motorace USA by Williams Electronics is one of the latest driving games to hit the market. It utilizes the overhead view of many earlier car games and also combines in the prospect of reaching specific destinations. The catch is that you're not manuevering a car, but rather a motorcycle, on a cross-country race against a field of dune buggies and an ever-dwindling fuel supply.

You begin in Los Angeles with a 500 cc bike and must drive to the first checkpoint in Las Vegas, using a joystick control along with a throttle (speed) and brake button. Along the way, the highway splits in two, goes from 4 lanes to 2, and in one spot a wheelie ramp is



erected and can be used for 700 points. Gas cans are situated at several locations on the roadway, and running over them will replenish part of your fuel supply. Blocking your path to your first city are an endless stream of cars. These VW look-a-likes all try to keep your motorcycle from passing. When you do make it around one of the jalopies you're awarded 500 points and moved up one position in the ranking.

Once you get near the outskirts of Las Vegas, you'll see the city's lighted skyline and the expressway stretching toward it. Suddenly, a group of mad drivers will start toward you, going full speed and bent on hitting your motorcycle head-on. Colliding with a car, like the ones at the beginning of the round, will throw you into a spin and subtract a small amount of gas.

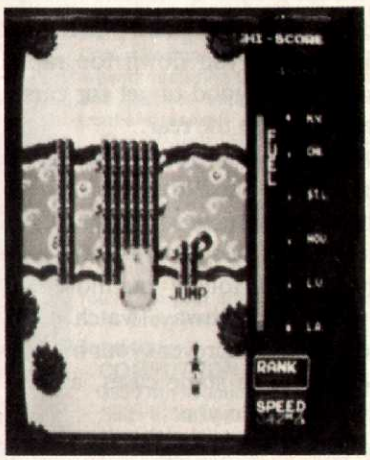
After you reach the city you'll get bonus points according to your current ranking. With the points, an equal amount of fuel will be given (3,000 points will fill an empty tank), and you'll be set to embark on the second leg of your journey.

The third round (to St. Louis), and the fifth round (New York), are identical to board 1 except for the few extra turns at the end.

The second board places your motorcycle in the middle of a desert, on the way to Houston. In this phase your challenge is to not only get by the desert cactus and brushes, but go over rivers either by jumping them (700 points) or using the bridges which span their length. Along the way, points will be situated at various locations between the trees and rocks, moving over them will award the values (100-500) to you. Getting across the desert will put you back on the highway again, and after you go through the tunnels (where your cycle disappears briefly from view) you'll reach the suburbs of Houston. Planes will fly across the sky to herald your arrival and you'll receive the bonus for your ranking.

The fourth board (from St. Louis to Chicago) is the same as the second except for the location of the gas cans and bridges.

For successfully completing the course and arriving in New York, you will be greeted by a waving Statue of Liberty as you ride into town. Here, you will be given bonus points once again for your position in the race, as well as a special bonus for any remaining fuel. The game then starts over again, with a full fuel tank (faster motorcycle) from



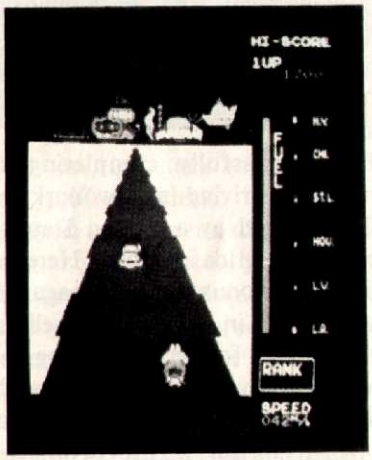
Los Angeles as you begin in 90th place.

Strategies: Motorace USA is a reflex game that relies less on hand/eye coordination than it does patterns and special driving techniques. Although it starts out easy enough, the succeeding levels introduce faster bikes that increase your speed, making the game faster. Overcoming the speed problem is the major strategy used in Motorace, and,

once it's mastered, will allow you to play forever very easily.

Level 1, 500cc/Round 1 to Las Vegas: Go all out on this board. Open the throttle and get up to the maximum speed of 150 mph. As the cars start approaching, get to one side of the road.

After a few seconds, the road will split with a median up the middle. To the right there will be one lane, while on the far left two will be present. Try to take the one on the right as long as no car blocks the entrance. If a car should enter while you're on the right roadway, merely let up on the speed and wait for the



road to return to 4 lanes. Never brake. Braking slows you down too rapidly, making you a good target for cars approaching from the rear.

Once you have four lanes to work with, move to the extreme left. When a car begins to get near to you, move to the right and let it pass. Don't move too early or the car will follow your movements. On the open highway, watch out for puddles. They'll prevent your bike from moving, and in some cases, allow the cars to plow into you.

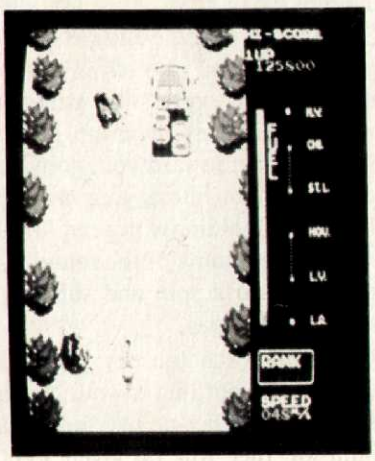
After a few seconds the roadway will shift to 3 lanes. This will be rapidly followed by the appearance of a wheelie ramp at the far left. Do *not* use it. When your bike is back on one wheel it can not turn. With no other alternative, you'll often end up on someone's back bumper.

Once you pass the wheelie ramp, the road will narrow into two lanes, then separate. One lane will curve to the left, while the other will remain to the right. Use whichever one is clear, then go around the turn to the left. The road will split again, as it did previously, before winding back and forth. After it snakes back and forth three times, it will convert to a two-lane road at the left. The road will stay straight for several seconds until you reach the suburbs of Vegas.

Round 2 from Las Vegas to Houston: Here, the scenery changes to a desert. Getting through this round productively depends largely on your ability to retrieve the gas cans which are strewn about the ground.

The patterns set forth below will enable you to pick up all the fuel and cross all the bridges with ease. Since the highest speed possible on the desert is only 128 mph, things should seem a little slower.

Start in the center to pick up the first gas can. Cross the first bridge and proceed to the left to get the next can. Get the following gas in the center of the screen, then move to the right. The next three sets of fuel will be on the right side of the board, pick them up then move to the left. You'll encounter three cans of gas in a straight line, followed by a single container. After grabbing these, move

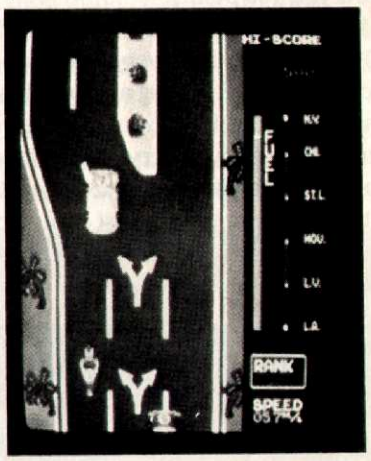


to the right to pick up the remaining two buckets.

Once you pick up the final two, go across the bridge in the middle and proceed onto the roadway. When the road begins winding back and forth, you'll encounter a series of tunnels. Stay away from any cars than approach to make it to the outskirts of St. Louis.

Screen 3 Houston to St. Louis: The third board is the same as the first except in two respects.

First, the wheelie ramp will be situated on the right lane of the three-lane stretch of road. The only other difference occurs near the end. Instead of two turns, you must maneuver four, including an X-shaped turn. To navigate the X get on



the right-hand lane, then, as the road bends, go left to get around the piece of road jutting out from the side, then proceed immediately back to the right lane of the next turn. Continue through the remaining turns to reach St. Louis.

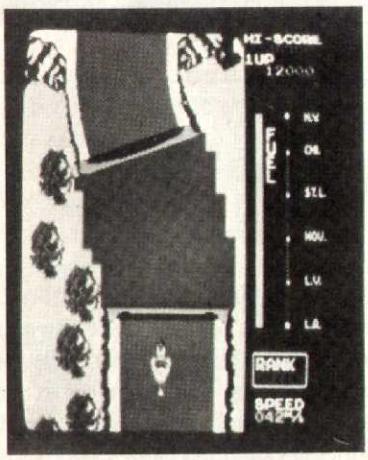
Screen 4 St. Louis to Chicago: This stretch of desert differs from the first in several ways. There are many more obstacles in this round. Also, a majority of the rocks and cacti are situated in the center of the board, making it much more difficult to traverse the screen. The gas can locations are in different areas. Again, you should strive to pick up every can, finishing the round with a full tank.

The first gas can will be in the center of the board. The second will be to the right, while the third will again be in the middle. After picking up the fuel in the center, move left and stay to this side for the remainder of the round.

Screen 5 Chicago to New York: This section of your trip is identical to the third (Houston to St. Louis.) The scene is a bit longer, with a few more curves at the end, but otherwise there is no difference.

Straight-a-ways: All of the straight-a-ways should be taken at full speed. Place

your bike in the center of the road and move either left or right when a car approaches. Once the vehicle passes, return to the middle and wait for the next one to appear.



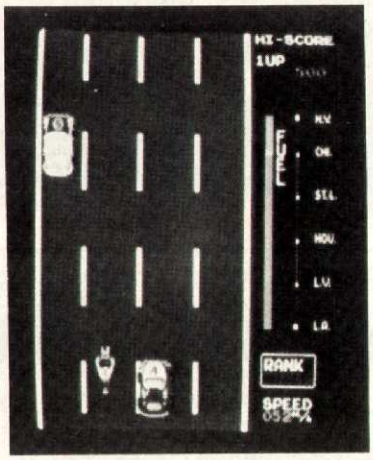
Level 2, 750 cc: Although you will be riding a faster motorcycle, you should treat this level just like the first. Following the patterns for level 1 will successfully get you through the 2nd cross-country trip, though you may not reach as high a ranking.

Level 3 on—1200 cc: The 1st, 3rd and 5th boards, (the highway scenarios) should be followed as originally outlined. Turn earlier than usual, though, because of the motorcycle's great speed (214 mph) since you will have to make some compensations. Care must also be taken on the turns at the end of the roads so let up on the accelerator when you're going through these curves.

A different strategy is required for the desert scenes (rounds 2 and 4)). You must follow the same pattern for retrieving the gas cans, except at a slower speed. If you try to go all out on these boards, you'll inevitably miss most of the gas and hit more trees and rocks.

To use your motorcycle's 'cruise control', push on the accelerator button until you're going between 140 and 142 mph. When you reach this speed, hit the brake button while keeping the accelerator depressed. This will keep your speed at a steady rate, unless you release one of the buttons.

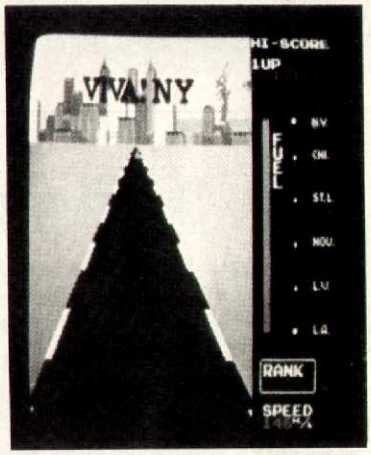
While at this pace you can easily pick up most of the gas. Since you're traveling at about the same speed as the other



cars, they will move extremely slow down the screen, making them no threat at all. After you get about half way through the course, the cars in front of you will run out of gas and putter down the screen. Avoid these vehicles (usually only 2 or 3), then resume play.

You must also utilize the 'cruise control' strategy for the straight-a-ways of level 3. Keep the speed at around 180 mph (by pressing both buttons at once) to pass the cars.

Once you can continously get through



the third level, you can play forever, since the game doesn't change after that.

Although it is nothing new, Motorace is a good driving game with some new twists. ▲

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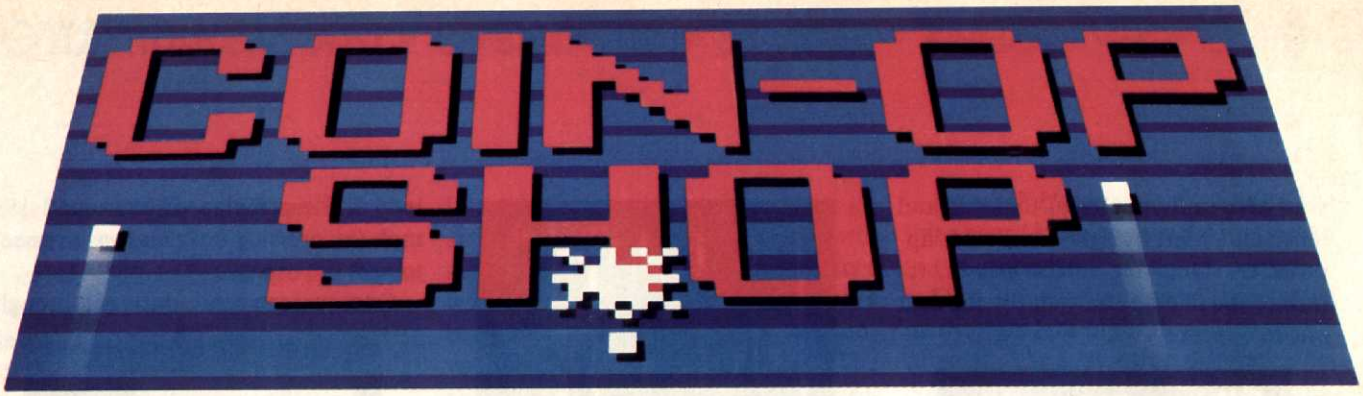


Design Trends On View for '84

by Zelmo

The end-of-the-year AMOA extravaganza proved that if anything is true for coin-op in 1984, what we can expect is a broad range of products which may be only a small step, or giant leap, ahead of what has been the norm. Obviously, given the way things were going, something had to change, whether it was players' attitudes about each new crop of games, or manufacturers finally realizing that they couldn't get by doing what they had been doing.

Together, these two factors have done much to shape the current models as well as those still in various stages of development. The important fact to understand regarding all of this is that substantial inroads can't be made overnight. The process is a long and complicated one, with no instant solutions possible to dramatically and completely alter what has been the routine for the past two years.

Instead we are seeing a more methodical appraisal of the arcade marketplace and an increased sensitivity to what today's players might like, even if it means some breaks from conventional tradition. The newest games reflect this approach with some models that are, admittedly, nothing more than rehashes of familiar themes or those which attempt to trade-off on some recognizability in order to attract players. However, there also exists a wealth of truly innovative machines which have something different to offer.

The inherent dichotomy in this design trend will, by necessity, be a major part of the coin-op industry in the months ahead. The reason for this is that, although an evolution in video is at hand, none of the manufacturers are certain as to how far they must go in order to attract players. So we'll be seeing a mixed bag of games that might straddle the line in introducing new elements at the expense of totally discarding the basic principles of video game play. No one is willing to be *that* radical, although the time is fast approaching when each new game might not have any direct relationship with the one that preceded it.

Anyway, no matter how you look at it, what is true is that the games are getting more interesting and involving with better graphics and improved effects. However, these changes aren't going to come cheap. In fact, more and more locations around the country are already increasing the price to play the latest efforts from 25¢ to 50¢. Are the games for '84 worth the investment? You'll have to judge for yourself.

NINTENDO'S DONKEY KONG 3

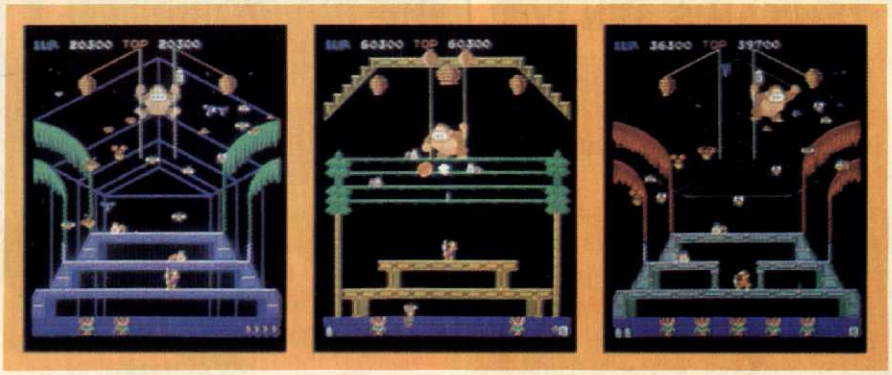
Having gained a measure of success with Popeye last year, Nintendo has once again returned to a theme which helped establish them in the business. It's almost as if the company has a little repertory group of video characters who are all interrelated. First there was Mario going after his girl friend being held captive by Donkey Kong. Then we were introduced to Junior who was out to free his dad from Mario. The simians then went on vacation and Mario picked up a brother to help fend off a set of different characters.

Now Mario's gone and we have Stanley the gardener who is trying to protect his flowers against Donkey Kong and his fighting bees. There's three different screens to the game and four levels of difficulty. Using a joystick and button control, the object is to maneuver Stanley around so he can use his spray gun against the bees, as well as a weapon to force old DK up to the top of the screen. By either eliminating all the bees, or getting DK up the vine, the screen is completed and it's time to move onto the next.

Actually nothing more than a slide-and-shoot game, Nintendo is obviously hoping to trade-off on the recognition of Donkey Kong, in much the same way that Bally/Midway has found ways to perpetuate Pac-Man and that clan. With Donkey Kong 3 they might have something, not because of the originality of the theme, but due to the fact that the game is going to be available as a conversion for old, past-their-prime Nintendo games which started the saga to begin with.

On this basis, DK 3 has a chance in the

current coin-op scheme of things. How players will respond is another question, however. Little Stanley is at the bottom of the screen and can be moved side to side or up and down. As the action begins, Donkey Kong is in the middle of the screen holding onto two vines. At either side are two beehives from which an arsenal of attackers will appear. Included in the squadron are buzzbees which attack with spears, and beespy who must be hit twice to end their run on Stanley and the flowers.



Meanwhile, if any bees get down to Stanley's garden, they'll get that much stronger with each flower they're able to take. If you can handle all this, you should still be trying to push Donkey Kong up the vine. In fact, get him past a super sprayer that's hanging from one vine and Stanley can pick it up for extra firepower. In the second screen the scenario remains basically the same, although DK will now throw down coconuts in an attempt to hit Stanley.

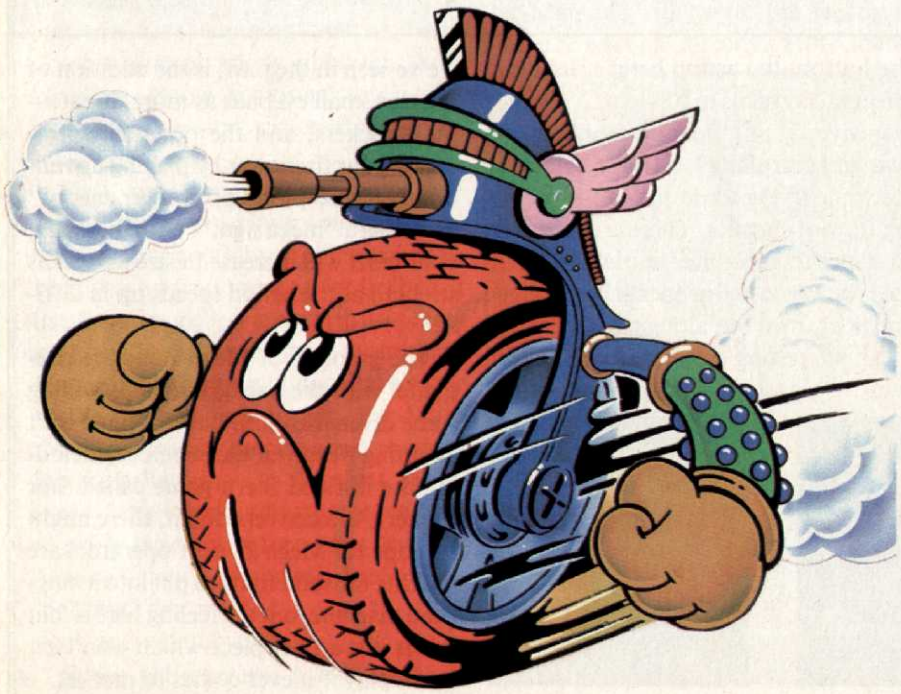
The graphics on-screen are comparable to what Nintendo has brought us before, and if you have a thing for a character who has made it from the video game ranks to stardom on Saturday mornings, then Donkey Kong 3 might just be the answer as a way to spark some new interest in what has become something of an arcade legend. One just wonders if DK 3 does gain a following, should we be prepared for other variations in the future and do we want more? Time, as always, will tell.

NICHIBUTSU'S RADICAL RADIAL

Probably better known to arcade game players for such past efforts as Crazy Climber and Moon Shuttle, this coin-op manufacturer continues to introduce a couple of games a year which usually offer some nuance or subtle difference on more standard themes.

With racing games remaining an extremely popular motif for video, Nichibutsu has incorporated variations within the game play of Radical Radial that make it a surprisingly viable alternative to the other models currently available. Here the scenario finds you having to maneuver a tire with a joystick control, as it races on a course with alien craft to contend with.

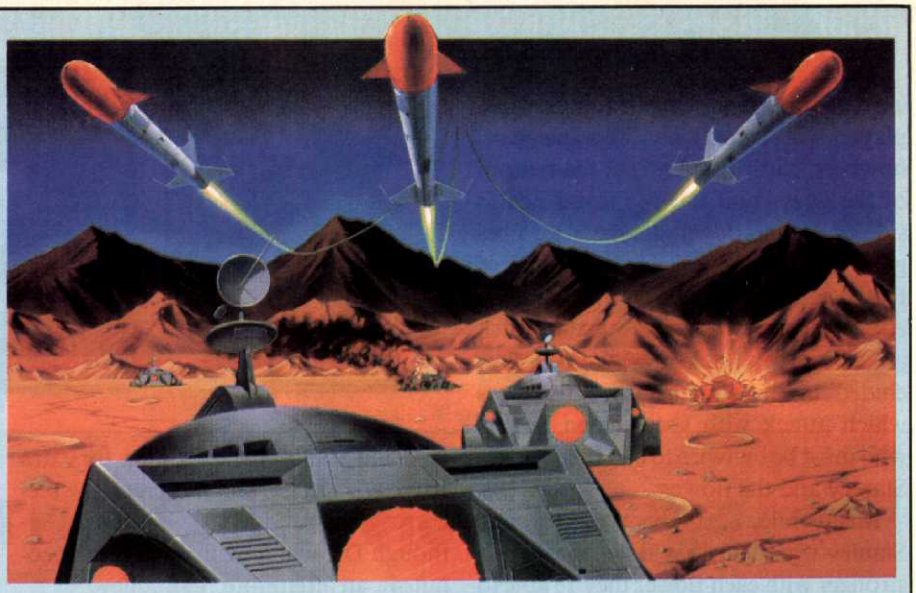
Rather than being just a test of getting from one point to the next as quickly as possible, Radical Radial provides your tire with firepower in order to shoot any oncoming enemies. The action is fast-paced, with obstacles such as mushrooms, worms and oil spills to avoid as you continue on your merry way. In addition, similar to Motorace USA or Bump 'N Jump, there are barrels and logs along the course which you have to jump over, by using a button control on the front panel.



Basically, however, at this point in time, the game isn't anything we haven't seen already. The farther you're able to go, the more difficult the play in terms of shooting aliens and avoiding obstacles, but somehow, in this day and age, there's a need for more from a game.

The graphics and sound effects are decent enough, but Radical Radial doesn't get untracked and shows its age. A year ago the response might have been different, which leads one to believe that you probably won't be seeing too many around, unless an operator passed on some of the other driving games recently released.

TEHKAN'S SENJYO



Hidden away in a little spot of the AMOA was a small booth by Tehkan, a company that has done some licensing of its games on these shores. An initial opinion is that if Senjyo does make it here, it will be with a different name and from a different manufacturer.

Actually, on first glance, the screen action is mildly reminiscent of Activision's Robot Tank or Atari's Battlezone (2600 version), with a stationary base at the bottom of the screen having to fire out at approaching enemies. There's even a display panel below the base which provides a radarscope, an indication of the number of foes destroyed, your reserve bases and a multiple value scoring screen.

Although Senjyo might look predictable, Tehkan has added some twists which enhance the overall story line and play action. A joystick controls the positioning of a cross-hair sight on screen, as well as your ability to pan from side to side, while a single fire button activates twin laser guns to get enemy space tanks. These tanks, for the most part, in the beginning of the game, don't move that rapidly so it's a matter of keeping track of locations on the radar. However there is a raider missile, which comes out full speed ahead over the rolling terrain, normally when you least expect it.

Destroy 32 tanks and you're ready to move onto the next round, similar in concept to Time Pilot with its advancing levels of play. One of the nice touches incorporated by Tehkan is the potential for multiple value scoring, which has been a staple of pinball machines for so long. After four space tanks have been wiped out, a "spotter" appears on screen, which, if hit, can result in 2X up to 5X scoring.

From the second round on, you'll encounter "eliminators," which will pop up after you've fired a given number of shells. If you're able to hit this target, all space tanks that might be on the screen at the time are instantly destroyed.

The graphics and effects are really very nice on Senjyo, with a three-dimensional landscape filling the screen, however, the restricted movement of the laser base compared to the maneuverability of the various enemies, means that your joystick control has to be extremely precise if you're to survive for any length of time. But whether this limitation proves to be more frustrating than it's worth for players will ultimately determine the size of the audience the game might ever draw.

The feeling here is that there needs to be more to the play if Senjyo is to sustain interest over the long haul. Variations on the basic action from screen to screen could have helped broaden the appeal, given the limited number of special targets and values to shoot for. For the home this effort would have some promise, but as an arcade game it might be just a little off base.

KOSUKA'S MEGA ZONE

Sometimes the more things change the more they stay the same. While so many other new games are trying to blaze new trails, Kosuka Company Ltd., via a licensing agreement with Konami, has brought us Mega Zone.

Using a single eight-way joystick and fire button, the action here is similar in effects and visuals to Xevious. You must maneuver your "floating tank" over a changing, scrolling landscape below, all the while trying to destroy a never-ending flow of enemies. There are 32 different types to encounter in the air and on the ground, as well as enemy bases which must be wiped out along the way.

An interesting cosmetic touch, which helps to elevate this effort from others we've seen in the past, is the addition of big and small eyeballs as more threatening attackers, and the potential to increase your firepower by picking up randomly placed pieces of "power energy" as well as a "mega sign." With the latter, your craft will increase in size as well as strength as the action speeds up in difficulty.

The graphics of Mega Zone are adequate, with the backgrounds providing some diversification, but the game isn't anything we haven't seen before, including the ill-fated Stern game called Star Jacker. As a conversion kit, there might be hope for Mega Zone if operators are looking for something to put into a long-dead machine, but the feeling here is that this is just a filler piece which won't get much play if it ever comes to market.

TAITO'S ICE COLD BEER

All right video-game funseekers, are you ready for something entirely different? Well, Taito is hoping that you are, and their newest creation might just prove them right.

Ice Cold Beer is a definite throwback to another era, when coin-operated amusement games were mechanical and play action was simplistic at best. Dressed up in a conventional upright video-style cabinet, there are two joysticks to control in manipulating a bar on the board in order to land a ball in the right hole.

Now let's take that again. The board is made up of different holes—some numbered and some not—and the object is to get a ball into the flashing lit hole. You get three chances in all and an opportunity to see how skillful you are in controlling the bar on which the ball rests and rolls.

What's interesting about Ice Cold Beer is that for all its simplicity, it's a surprisingly enjoyable game to play. You get the feeling that it's your fault when you land in the wrong hole, which is not only frustrating, but also a challenge. Looking at the game, after all, your initial reaction is that it should be a snap to go from one lit hole to another, but patience and a steady hand are really necessary.

This is a noble experiment for Taito, which throughout its existence has never seemed afraid to venture into new, original game-design ideas. With Ice Cold Beer, the audience is envisioned to be those players who also happen to frequent bars and taverns. And from the response the game received at the AMOA, it looks like this model may be around for quite sometime, since it did generate so much excitement.

BALLY/MIDWAY'S JR. PAC-MAN

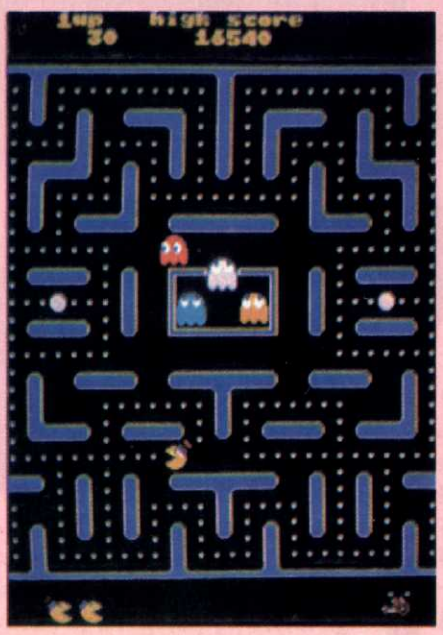
Just when you thought you had seen the last of it and the legend had finally been put to rest, Bally/Midway brings another variation to the theme which has done so much for putting video in the spotlight.

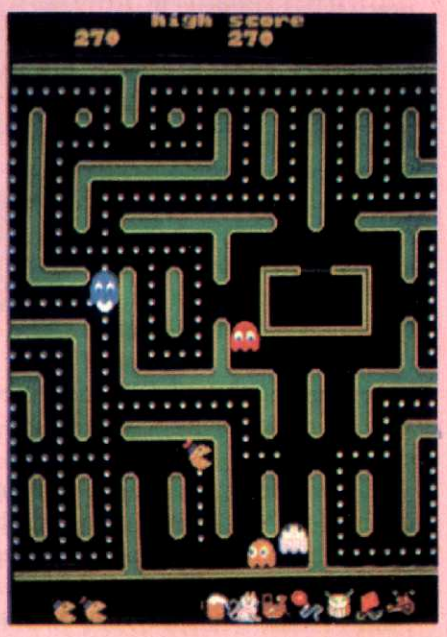
Beginning to resemble the King Family, the Pac clan continues to grow with this latest creation—Jr. Pac-Man. The scenario isn't anything that anybody doesn't already know, although there have been some additional touches to make this version different from its other relatives.

First and foremost are seven new mazes for pattern players to master, as well as a horizontally scrolling screen to keep you on your toes. As for the board itself, power pellets are worth 10 points each, with rack indicators (everything from a cat to a drum and a kite) similar to the floating fruit in Ms. Pac-Man, moving through the maze and converting the pellet values to 50 points. However, if these rack indicators should get to an energy dot before your Jr. Pac-Man can, they'll eliminate it, leaving you high and dry without a way to strike back and defend yourself.

Finish off a screen, and Bally/Midway has elaborated on the interlude sequence, with Jr. Pac-Man meeting up with a new baby ghost called Yum-Yum. What these two have up their sleeve is anyone's guess, but if you've been a fan of the previous Pacs, then Jr. might well offer you some new challenges and variations on the now classic theme of maze games.

The only problem is that after so long a time and so many versions of Pac-Man, including the company's Baby Pac-Man pin/vid game, the feeling is that it's enough already. How many times can you go back to the well and not come up dry? As a conversion, Jr. Pac-Man may prove to be a cure for existing Pac machines, but that's about all we can give it a chance for.





THE FLIPSIDE

Pinball's Comeback Continues

By Zelmo

The new year is off and running and most of the attention has been fixed on bringing more interactive game play to the arcades. After realizing that conventional video might not be the only game in town, coin-op manufacturers have begun reappraising their possibilities and alternatives. Admittedly, much of the recent activity has focused on the development of laserdisc games with their capability of offering more dimensionalized and realistic graphics on screen.

However, there has been another movement in progress which finds pinball machines gaining an increased amount of serious consideration as a necessary part of any game room line up. The growing belief appears to be the acceptance of flipper games as a truly unique and highly interactive entertainment form, at a time when this is precisely what the industry is looking for.

The surprise has been what has taken so long for pinball to earn another shot. After all, beneath a thin sheet of glass there has always lurked a very real and highly tactile world of such component parts as bumper, targets, spinners, kick-out holes and, of course, flippers and a rolling silver ball. Indigenous to the games was the never-ending challenge of trying to get control of the action and tempo in each geometrically designed environment.

Rather than representing the epitome of unpredictable game play, as was the case with the way most video gamers viewed pinball, the machines never exemplified anything more than the need for sustained concentration, hand and eye coordination, as well as timing and the ability to anticipate and plan ahead a suitable strategy. But then these factors might well be said for almost any coin-op attraction over the years. In terms of video, it was somehow easier to universalize the appeal for a new generation of players, leaving pinball and other types of arcade games to be categorized as antiquated and not sophisticated, or high-tech enough to entertain the modern player.

Well, what was lacking in this scenario was the understanding and awareness that, no matter how many generations may come and go, there are basic elements inherent to this special class of leisure time fun which has enabled it to survive and grow for so long. One vital ingredient is that any given creation be fun to play and provide equitable value for the price. This is true whether we're talking about laser games, pinball or shuffle alleys. More important, though, is the notion that everyone likes variety and no idea is too far-fetched to have a chance.

Anyway, what we are now seeing, which tends to add further support to the notion that coin-op companies are exhibiting a more open mind to game design, is the appearance of a broader range of diversified products, on display at the AMOA. And, keeping the ball rolling, were . . . Ready . . . Aim . . . Fire! from Gottlieb and Firepower II from Williams.

Gottlieb's . . . Ready . . . Aim . . . Fire!

Never having really abandoned pin-

ball, even when the company enjoyed success with video games and recently underwent a corporate name change, Gottlieb is still willing to test the pinball waters to see what will sink or swim.

This time around they've put together a package that's reminiscent of flipper game designs from the Fifties, although they have managed to dress things up a bit. The playfield is simplistic, wide open and color-keyed. A large, center rollover lane is at the top of the board with open areas at either side. There are three thumper bumpers which come next, flanked on the left by two yellow targets and at the right by a curved bank of five orange targets.

Move down and the action continues to be on the sides with two more thumper bumpers. A single red target is on the left, while there are three green targets at the right. The bottom is a conventional design with lanes leading down to the flippers, although there is a center post between the flippers for potentially saving an otherwise *lost* ball. And that's all there is to . . . Ready . . . Aim . . . Fire!.

The one lane at the top does increase in value from 5,000 points up to 25,000 points, but the main object of play is to get out all ten color-keyed targets. Once this is accomplished, the lit thumper bumpers will start flashing. Hit them and the bonus multiplier value will increase up to a maximum of 4X. With every lit target hit resulting in out-hole bonus points worth 3,000 in the bank, there is a chance to build up to a possible 120,000 points on any given turn.

In addition, if you can get three flashing bumpers, the out-lanes on the bottom will light for a potential extra ball. Make the fourth flashing thumper bumper and the top lane is suddenly worth a free play. However, that's not all: You'll also score the 120,000 point total you've built up and be able to build it up again and again.

For those who have continued to be fans of pinball, there's nothing startlingly different about . . . Ready . . . Aim . . . Fire!. The graphics are colorful with an attempt to incorporate a carnival shooting gallery theme that's even complemented by appropriate sound effects. The idea of using color to tie in various playfield features has always been a proven method of establishing a visual correlation and interrelationship of targets on a board, and it's no different here.

Where the reservations come in regarding the appeal of . . . Ready . . . Aim . . . Fire! is the choice of layout. The access to key areas from the flippers isn't as direct as it could have been, leaving players to aim for general areas and hope that the appropriate bumpers will do the rest. There are no real reverses and even the pure left to right or right to left shots, leaves much to be desired. After a few plays, the limitations become obvious and the strategy is one of trying to compensate rather than enhance what's available.

The programming of the features does manage to keep all areas of the field alive and even forces players to try to be selective in aiming for a specific target that needs to be hit, but it's just not enough. Overall we're left with a game that might be a good introduction to pinball for the novice player who might be slightly apprehensive to try their hand, but when it comes to those who know what they're doing once the game begins, . . . Ready . . . Aim . . . Fire! misses the mark by not featuring enough or doing better with what was available.

Recently one of the prevailing trends for pinball manufactureres has been the reissuing of successful games from other eras. We've seen Eight Ball Deluxe, Centaur II and Super Orbit to name just a few. Well, this Firepower has only a slight resemblance to its highly successful predecessor of three years ago. In fact, in many ways, this effort is much better than its inspiration.

Four lanes at the top (A-B-C-D) start off the action, separated by a center target which can mean multi-ball play when it's lit and hit. Move down and there are four thumper bumpers placed in almost a square shape. At the left is a spinner with a lane that can lead back up to the top, or all the way over and around, back to the bottom of the game. At the right rests an interiorly set kick-out hole, which will lock up and capture a ball, as well as a wider sweeping area that offers access back up.

The middle of the field features the enticing placement of a bank of three

(continued on page 74)

Williams' Firepower II

In an obvious contrast of style and philosophy compared to . . . Ready . . . Aim . . . Fire! Williams' newest offering, Firepower II, gives the player a package of high-energy action accompanied by an equally powerful sight and sound experience.

Mind Games

Interactive Play Opens New Doors To The Future

By J. Ray Dettling

The hit tune from the latest Styx album played over and over in my mind, while Mr. Harrison rambled on about the Bill of Rights. His words went right through me. No matter how much I tried to get into it, Civics was a bore, especially today. The weather was great, and all I could think about was tonight's big festival dance.

When the 3:00 o'clock bell finally rang, I rushed straight home and called Sherry on the videocom.

"Hi Mark," she beamed. Her fresh tan looked great against her light brown hair. "What time are you gonna pick me up?"

I was relieved to hear that she was still set for the dance. "That's what I called to check with you on. I was thinking about 7:30, or if that's too. . . ."

"No 7:30's just right. Is Spencer coming?"

"I don't think so. He called me last night and said he had to work on his computer. . . ."

"God! What's with him lately? I had him all set up. This friend of mine, Debbie; she's really got a great personality and cute, too. I told her all about Spencer and she couldn't wait to meet him." She paused then shook her head. "That really bums me out."

I thought about Spencer. Aside from his grade point average, Spencer Feldman was not your typical high school senior. He wasn't into sports and rarely dated. In fact, in many ways he was downright antisocial, except when it came to computers and video games. There, he could compete with the best.

Spencer and I both did pretty well in science and math, and that's how I really got to know him. Anyway, despite his idiosyncrasies, I took a liking to him. I guess I was about the only friend he really had. But he had been acting different lately—a lot different. Ever since he had won the cash prize from the video game nationals. Anybody else would have partied on the money or put it toward college, but not Spencer. He threw it all into his game room.

All I could do was look at Sherry and shrug. "He'll pull out of it," I said. "Right now he's hung up on his computer."

I didn't realize how much so until the following morning when I decided to drop by Spencer's house.

"Oh, hi Mark," he said. His voice trailed, almost as if he wished I hadn't come over. "How was the dance?"

"Great," I answered knowing all along that he really didn't care. Then, just to check his reaction, I added, "Hey, that Debbie's not bad."

He grunted with little interest as I expected.

After what seemed like a long silence, he motioned for me to come in. The first thing I noticed was the new carpet. "When did you guys get the new rug?" I asked while testing it with a bouncing motion.

"Got it in last week," he said blandly.

"Looks great. . . . By the way, how's your computer coming?"

Suddenly it was like I was talking to a new person. He jumped on the topic. "Mark, you won't believe the stuff I've been doing."

"Well are we just going to stand here, or are you gonna show me?"

"Let's take a look," he said, then started up the stairway.

I touched the wrought iron handrail, then quickly jumped back. "Damn!"

Feldman laughed. "I forgot to warn you about the static."

"That's pretty strong. Did you see that spark?"

"About 10,000 volts," he said. "Completely harmless though," he was quick to add. "All you have is voltage, almost no current at all."

"Right, like the big Tesla coil in physics lab. 125,000 volts and you could hold the electrode all day," I said. "Scares the hell outta you when you don't expect it though."

"You haven't seen my setup since I

Illustration by Mike Pantuso

bought all the new equipment, have you?" He knew I hadn't and didn't wait for an answer. "I think you'll be surprised."

Surprised! I was blown away! His whole room was rigged. One wall was taken up by an oversized videocom screen. A quadraphonic speaker system covered all four corners, while track lights, projectors and control panels were scattered all around. Two half-gutted obsolete laser disc drives sat on a small workbench alongside a disorderly array of tools and test instruments.

Feldman smiled when he saw my surprised expression, then invited me to sit at the main console, which consisted of an adjustable recliner with fingertip controls at each armrest. A string of cables ran from the console to the videocom terminal.

Feldman then handed me a pair of glasses with a small antenna extending up from the right side. "Here, put these on." Before I could ask what they were he added, "electro-optic shutters, they're synched to the videocom scan frequency. You've seen them at some of the arcades."

"Sure, for the 3-D effect," I said. "Spence, I can't believe what you've done here."

"Wait till you try the game," he said, then slipped a videodisc in the drive. "Ready?"

"What game is it?" I asked. I didn't want to look like a complete klutz on the thing, especially since Feldman was a real pro at it.

"Remember Asteroids? Well this is like Super Asteroids. All you have to do is maneuver around the asteroids and blast the ones you can't avoid. I'll start it out slow."

"Go for it," I told him. I was already familiar with the controls.

The room lights darkened and projectors came on. Stars were thrown on every wall. I pushed the throttle forward and the room filled with the sound of rocket engines while a dazzling 3-D starfield appeared on the videocom screen. Dozens of tumbling asteroids plunged toward me. I maneuvered frantically, constantly firing my laser until I was finally overcome. When the game ended, I found my pulse pounding and beads of sweat were on my forehead.

"Wow! This is super! How did you do it all?"

"It took a lot of extra programming, but when you come right down to it, it's not really much better than the arcades."

"C'mon Spence, I've never seen anything close to this in the arcades. I mean this was so realistic, it scared the hell outta me a few times." I was truly impressed, but I could tell Feldman wasn't satisfied.

"It scares you in the beginning," he said, "but you quickly get used to it, because you don't get the complete environment. You get audio and video, and that's all. It's been like that for the last 20 years. No one has put real feeling into the game. No one has ever used the sense of touch yet."

"Tactile feedback,' I mused.

"Right on."

"Video games have always been a form of escapism. . . People put themselves in these imaginary situations and they really would like to believe they are beating the dragon or shooting space invaders and saving the world."

"But how?"

Feldman shook his head and let out a deep breath. "I don't know, but once I figure it out, we can make a whole new class of video game. The psychology will be much closer to the real thing than anything we have seen so far."

If I hadn't seen what Feldman had already done, I would've thought he'd been smoking something. When I left the room I didn't know what to think.

He walked me to the front door, and we both hesitated before touching the brass doorknob. Finally I gave the doorknob a quick slap. The 'crack' sound of billions of electrons cascading across the air gap between my fingertips and the doorknob was almost as exciting as the static pulse itself. "You really ought to spray these rugs," I said laughing.

"Ah, that's nothing. Watch this." Feldman shuffled his feet on the rug for about ten seconds, then slowly moved his finger toward the doorknob. CRACK! "See that? about 15,000 volts that time."

I tried to beat him but came up a few thousand volts short. "You know what's neat about it is that the anticipation is worse than the bite," I told him as I was leaving.

Feldman laughed. "Catch ya Monday."

"Right." I left, but I kept thinking about Feldman. I knew he was good with electronics, but I never realized just how good. I knew a little about the subject myself, but to put Feldman's contraption together, you had to be damn good. No wonder he'd been acting strange lately. He must have been spending all his time reading up on the stuff.

During the next two weeks I went over to Feldman's house several times. Once I even brought Sherry with me. She wasn't into video games and thought we were both crazy. Unfortunately Feldman had most of his equipment torn down, so Sherry never really had a chance to try the game.

Two more weeks passed and it was now getting close to finals so I had spent most of my time at home, then two nights before my physics final, Feldman called me.

"Mark, you've got to come over right away. I'll explain when you get here. Oh, and pick up two D-cells and a 9 volt transistor battery."

I had a lot to do, yet I figured a half hour or so wouldn't hurt. I told my parents I was just going for a short walk, then left.

Feldman was already waiting at the door when I arrived. "Did you bring the batteries?"

"Yeah."

"Great."

"What's up, Spence?"

"You've got to try my new gadget," he said as we walked upstairs to the game room.

"I don't have much time," I tried to explain.

"Video games have always been a form of escapism," he went on as if he didn't hear what I had said. "People put themselves in these imaginary situations and they really would like to believe they *are* beating the dragon, escaping the man-eating whatevers, or shooting the space invaders and saving the world. The problem is the game only offers rewards. There are no

punishments. The player never really feels threatened and without the threat you can't have a real adventure."

"What do you want to do, blast the player with a laser when he makes a mistake?"

Feldman laughed. "No, of course not. You don't have to go to extremes like that. All you have to do is make the player feel a little uncomfortable when he makes a mistake."

"I don't get it."

He looked at me and smiled. "You should. You gave me the idea in the first place."

Now I was really confused. "I gave you the idea?"

"Remember when you kept getting zapped by the rug a few weeks ago. You didn't want to touch the doorknob. It couldn't possibly hurt you, but the little sting you felt and, as you pointed out, the anticipation of it added a certain excitement every time you approached the doorknob."

I was beginning to get the picture. This is what Feldman was trying to achieve—that added dimension he talked about. I still wasn't quite sure how he was going to tie it into the game, but I had the sinking suspicion I was about to find out.

The inside of his game room looked like our physics lab. I spotted an oscilloscope, some breadboard electronics, assorted auto ignition coils, and a fancy looking Tesla coil. He picked up a plastic box. Two wires with alligator clips at the ends protruded from it. He attached the clips to two other wires coming from another box which was, in turn, attached to the videocom.

"Remember Pac-Man?" he asked.

"Sure. Who doesn't?"

"Pac-Man was a great game during its time because it had the right psychology. You could easily get yourself trapped in a corner then find your way out just in the nick of time. The narrower your escape, the more exciting the game became. And you were rewarded with a real feeling of accomplishment, especially if you made a smooth move.

"Now imagine how much better the game would have been if something negative happened to you every time you got nailed by the ghost. . . . ."

"You mean like getting zapped by the rug?"

"Yeah, sort of, except the rug gives you only one kind of static discharge—a quick pulse. By doing it electronically we can control the shape of the discharge pulse to achieve certain effects. And the neat thing is that it's perfectly safe. In fact, it's even safer than walking across the rug, because this little gadget controls and limits the energy flow."

Feldman was a whiz at physics and electronics and had a tendency to get off into a long-winded lecture. Finally, I interrupted. "Hey don't forget, I take can get hurt with 2-D cells and a transistor battery. It's self-limiting."

I must have surprised him. For awhile he was speechless, then said, "Good, since you're convinced, you can be the first to try it out." A satisfied grin developed on his face. He had me. I had no choice but to be his guinea pig.

"Pac-Man was a great game during its time because it had the right psychology. You could easily get yourself trapped in a corner than find your way out just in the nick of time. The narrower the escape the more exciting the game became."

Feldman placed a velcro band around my forehead. "There's a bunch of tiny electrodes woven in the fabric."

Although I didn't show it, I was a bit nervous. "What game is it hooked up to?"

"I modified an old Pac-Man cartridge. Changed the ghosts to blobs of ball lightning. When you get your energy pill instead of scoring points by gobbling up ghosts, you score by discharging the lightning balls which makes them disappear."

Before I had a chance to criticize his choice of games, he continued. "I picked Pac-Man because it was easy to modify and it'll be easy to compare the game play effect with and without the . . . uh . . . Tactile Stimulation Device, that's what I call it."

"You ought to call 'Pac-Man' 'Zap-Man,' I suggested somewhat facetiously.

"Hmm, not a bad idea," Feldman said, while making a few last minute adjustments. Then he directed his attention to me. "Well, ready?"

"Fire away," I answered with feigned confidence.

I'll never forget that first game. I let the first lightning ball hit me just to see what it was like. That was the last time I was going to let that happen. Feldman didn't tell me that the static discharge would last longer than the rug static. It was wild. He also took great care to make the sound and graphics work together to exaggerate the effect of the headband.

The bottom line was I was so determined to keep away from the lightning balls that my full concentration went into the game. The whole experience was unbelievably intense. But the rewards, I mean I can't even describe how good it felt to beat those little buggers. When the game finally ended I was dripping wet with perspiration, yet I felt great, and I was convinced that Spencer had really hit on something.

"Spence, this is super! You've got to put this together and have my dad write a patent application. You could sell a million of these things."

"I've got to work on it some more first," he said. "I'm glad you like it though."

"Like it! Hell, this adds a whole new dimension to Pac-Man—probably to all video games." I couldn't believe how nonchalant Feldman was about the whole thing.

"I know, I know, but can't you see, I've just scratched the surface. . . Mark, take a look at these." He handed me a dozen or so Polaroid photographs of oscilloscope traces. "Each one of these records shows a static discharge pulse shape. What I didn't realize at first was that by altering the shape of the pulse I could change the tactile effect."

He saw the confused look on my face then went on to explain. "What I mean is each type of pulse produces a certain type of effect. For example in a maze game I can make it feel like you've actually bumped into a wall everytime it happens on the screen, or give you a burning sensation when you come too close to a fire, all by changing the shape of the electrical pulse to the headband. In fact, I can even make a person feel

dizzy by synchronizing the pulse repetition rate to the brain's natural alpha frequency."

Feldman's mind seemed to drift off into space while I tried to take in the full meaning of what he had said.

"And there's something else," he went on, "something I'm missing, but I know it's there. I can feel it."

During the last weeks of school Feldman missed class three times. I was beginning to worry so I tried calling him. He was always too busy to talk but promised to call back.

It wasn't until graduation day that I realized there was no need to worry. Feldman surprised everyone and came up with perfect scores on his finals. He was sharp but not that sharp. How did he do it? I couldn't imagine him cheating. That wasn't his style. He'd flunk out first. I thought about it for a couple of days then decided I had to go see him.

When I got to his house his mother told me that Spencer left to stay with relatives back East for a few weeks.

The news took me by surprise. "When will he be back?" I asked.

"I'm afraid he won't be coming back for awhile. He's going to be enrolling in a special trade school."

"Where? He's never said anything about a trade school." It bothered the hell out of me that I didn't know about any of this.

Spencer's mother just smiled with a strange sympathy that told me she knew much more than she could say. "He told us to apologize to you, but everything happened so fast. He promised to write to you as soon as he could."

I left without saying another word.

Summer was nearly over when I heard from Feldman again. I received a letter. There was no return address, yet somehow I knew it was from Feldman.

Dear Mark,

I know you must be pulling your hair out wondering what happened to me. Then again I wouldn't blame you if you never wanted to hear from me again. It was a cold shot leaving you hanging like I did, but believe me there was no choice.

Something strange and wonderful has happened to me. It was quite unexpected. Unfortunately, I can't explain it all right now, partly because I really don't understand it all myself but it's all related to the video game experiments I had been doing right before finals.

I knew all along that I could change the tactile feedback effects by changing the shape of the pulse. What I didn't realize was just how much I could do, and most important of all, I neglected to consider the impact of extremely low energy pulses—those that are far below the level of discomfort, even before the level of conscious awareness.

Did you ever wonder why you can get a great idea one day and the next day you come up with nothing? What gave Einstein, Newton, Tesla, Aristotle, and the other great minds their insights? It was the state of their mind at the time. As you know, the human brain is an electrodynamic machine. Billions of neurons discharge tiny pulses of electricity in infinitely complex patterns to formulate a new idea. The conscious mind provides distractions that slow the process down. You see Mark, the brain is an extremely active *electrodynamic machine. Most of the time it is confusing itself with its own distractions. It is on those rare occasions when the distractions are at a minimum that the mind is at its prime. The Tactile Stimulation Device can put the mind in that state artificially. Mark, what I'm trying to say is we have an IQ amplifier.*

There's so much more to it that I can't explain right now, but I did feel I owed you this much. You've always been a true friend and without your help I may never have made these discoveries. I want to share some of the benefits with you, but for now I must ask your patience. I can't tell you exactly where I am and it may be as much as several years before I return home. But when I do, we will work together on the best video games in the world.

I must go now, there is much to be done. I will write to you occasionally.

Your friend,
Spence Feldman

For a long time I sat staring at the wall and tried to absorb what Feldman was trying to say. I must have read the letter 10 times. Finally I realized there was nothing I could do but forget about Feldman for the time being.

That was easier said than done. Everytime I stumbled upon a video game I thought about his Tactile Stimulation Device which further led me to wonder about Feldman himself. The trade school story didn't hang together. Feldman was set on a physics major and he was not one to change his mind without a long torturous head trip. I was left with no choice but to assume that he had hit on something big and somehow the government had gotten wind of it and placed a shroud of secrecy around him.

Over the next year Feldman wrote to me twice, but not once did he mention his exact location or anything specific about what he was doing. I did notice, however, that the first letter was postmarked Springfield, Virginia and the second letter came from Ft. Belvoir, Virginia. Both were suspiciously close to Washington D.C.

I had a notion to try and track him down, then dismissed the idea. It would take time and I couldn't afford it, nor could I afford to pay someone else to do it. It was a good thing too, because less than a month after his second letter Feldman returned home.

I hadn't been totally misinformed about Feldman. He really was going to a school, but it wasn't a trade school. It was a special training school attended by some of the best brains in the country. And Spencer Feldman wasn't a student there; he was the teacher.

Yet, teaching is a learning experience in itself, and Feldman learned more now than he had ever imagined. He didn't even sound like the same person I had known. He had deep insights of unimaginable complexity which seemed to lead him to the profound simplicity of nature's most fundamental secrets. I wanted him to teach me what he had discovered.

Feldman assured me that soon all of us would have this special gift of learning, that many special schools would form all over the world, that soon the world would be a much better place for everyone. But for now Feldman wanted to work with me and continue where he he left off before school ended. It was unfinished business that Feldman couldn't leave.

Somehow I knew that it would never bother Feldman that 18 months in the future a universal cure for cancer would be found by his mental offspring. Just under three years later, a successful anti-aging enzyme would disrupt the social structure of every society on

Earth, while at the same time violent crimes would have dropped to an all time low. . . . And in less than a decade, a new theory of gravity would be developed that would open the doors to the Universe.

No, Feldman would be content to know that all this resulted from his dream—*to make the greatest video game in the world.*

AFTERWORD

While the story you have read is science fiction, much of its content is based on hard science fact or work currently in progress.

Already there is one Michigan based company called 21st Century Tech Inc. that has applied for a patent on a static discharge feedback device similar to the one described in the story. VFB's progress in testing their device has been so remarkable, that they actually hope to introduce a whole new class of video games into the market place by the beginning of 1984.

If 21st Century is only half as successful as their research indicates, we can expect to see the emergence of advanced video games involving not only sight and sound, but touch feedback as well.

It is the research of companies like 21st Century that promises to open new avenues of human experience. In the story I extrapolated beyond the videogame experience into new levels of consciousness. What actually transpires in reality is anybody's guess.

We are exploring new territory here, and if the past is any indication of things to come, we can expect some exciting new spinoffs in the future of interactive computer entertainment.

J. Ray Dettling is currently a consultant to the video game industry. Previously he worked for nine years as a senior physicist at United Technologies Corp. A member of the Science Fiction Writers of America (SFWA), he has published many science fiction stories as well as science fact articles. He is currently working on a science fiction TV anthology and a science fact book. In his spare time he plays in a five piece rock band called The Wheatstone Bridge. He lives in Saratoga, CA with his wife Tess, who also plays in the band, and their five children.

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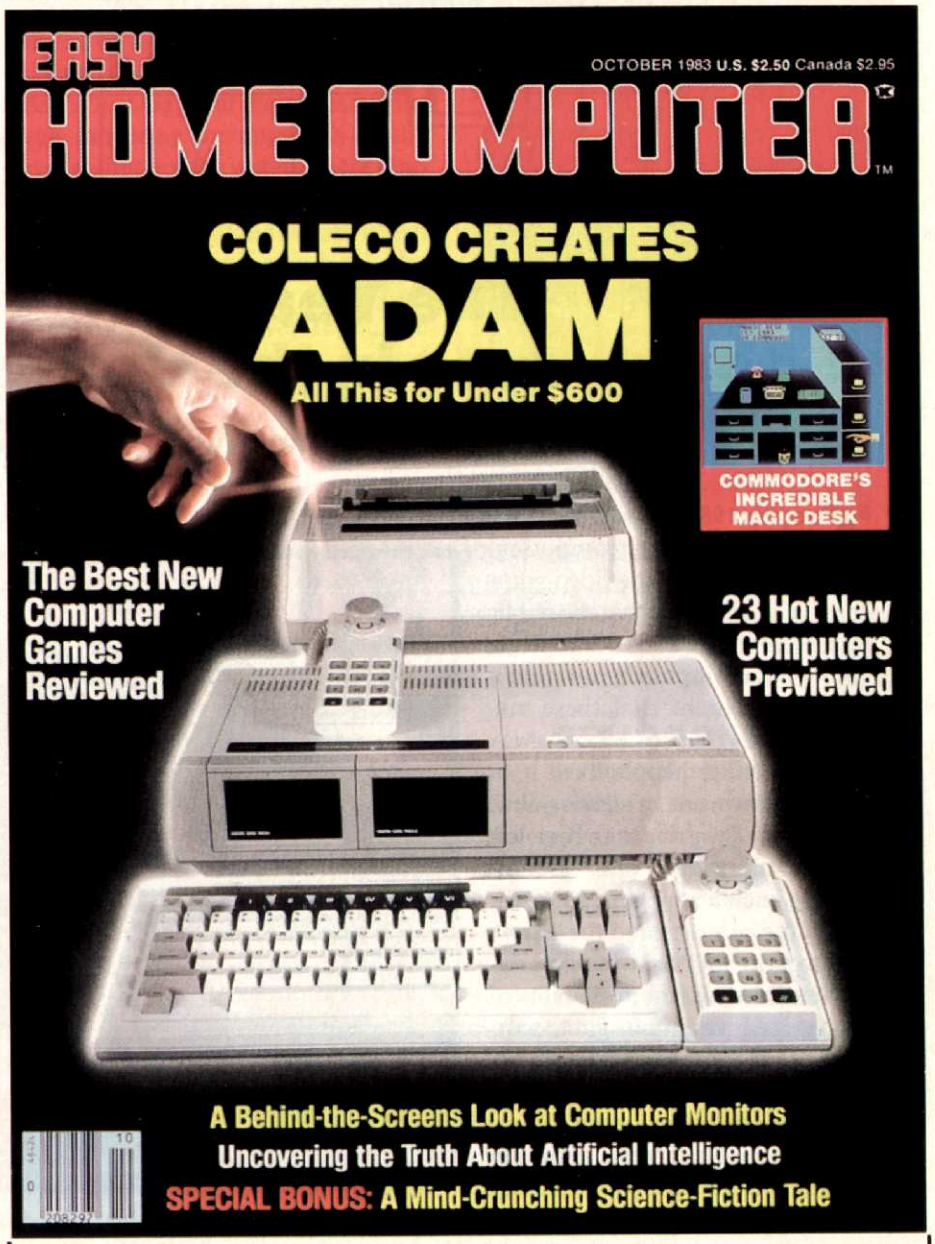

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COMPUTER CORNER

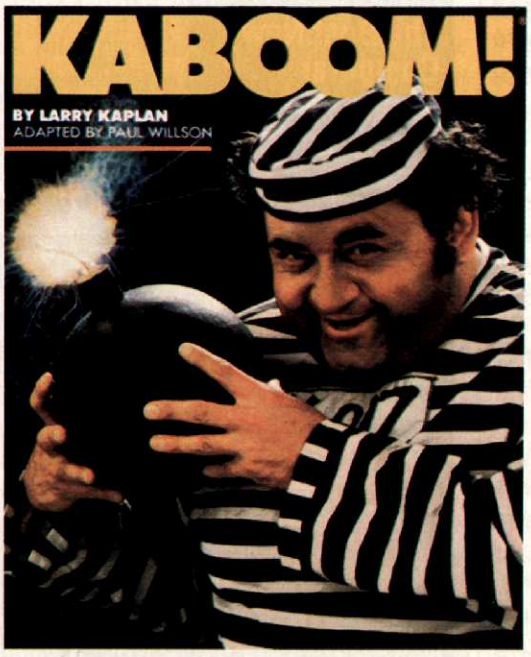
The Year In Review: Shockwaves in the Computer Industry

By Dan Persons and Mark Brownstein

The year 1983 was sort of limbo-land for home computing. With the bloom off the video-game console, it appeared that the public was expressing a keen desire to get comfy with computers, now that it became apparent that these machines were going to become a way of life whether people liked it or not. The downside of all this public interest was a price war that left almost all manufacturers, including such heavy guns as Atari, Texas Instruments and the Tandy Corporation (TRS-80) reeling.

The upside was the availability of a staggering variety of game software. Independent software vendors sprung up with original games that did not rely on a licensed title to attract sales. Activision cautiously tested the ground with lightly embellished translations of games originally designed for the Atari 2600 game system, while Parker Brothers took the plunge with lavish, accurate versions of popular arcade games. Even Atari broke down and announced that they would soon be releasing games for other computer systems, an action that few people ever dreamed of seeing.

—Dan Persons



KABOOM!

(Activision/Atari ROM Cart)

Where Parker Brothers is rushing into the computer-game field with brand-new, state-of-the-art releases, Activision is taking a much more conservative approach. As they did when they first began releasing games for Intellivision, Activision's initial ROM cart release for Atari computers, rather than being an original game designed specifically for the format, is an adaptation of **Kaboom!**, a blast from the past that dates all the way back to the dark ages of 1981.

Owners of the Atari 2600 game system, if they don't already own this one or two-player game, are at least well acquainted with it. At the top of a wall is a convict, at the bottom are three water buckets arranged one underneath the other. The convict, who is obviously a jailed anarchist, moves back and forth dropping strings of bombs while you try to catch the sizzling missiles in the buckets. Succeed in catching all the bombs in a wave and the next wave will feature a faster convict and more and more bombs. Missing a bomb results in a chain reaction of explosions and the loss of one of your buckets. You receive a bonus bucket for every 1000 points scored, and the game is over when you have lost all of your buckets.

Activision has added a few features to this version that were not present in the original. Most notable is a new head-to-head variation called "Pitch and Catch," where one player takes control of the buckets while the other player manipulates the convict. In addition, the person who adapted this game from Larry Miller's original version, Paul Willson, was apparently mindful of the paucity of computer games that use paddle controls. Kaboom! permits a player to use either paddles or joysticks, thus saving an owner from rushing out to buy a set of paddles that may never be used for any other game. It's a generous gesture, but if you really want to play Kaboom!, then purchasing some paddles would be a worthwhile investment, since joystick control is nowhere near as precise.

Aside from those details, and a few graphic fillips, this is virtually the same game that's available for the 2600, right down to the ability to reduce the size of

the buckets in order to increase difficulty. You won't want to do that immediately though, because the game is challenging enough without it. (And if you really want to see how tough this game can be, watch the game play itself during its attract mode. At the highest level the convict drops 13 bombs per second, probably faster than any creature, outside of The Flash, can handle.)

Kaboom! may be a golden oldie, but its status as a classic is well deserved. If you don't already own the 2600 version of the game, then this adaptation will give you all the challenge and charm of the original while adding a few new touches of its own.

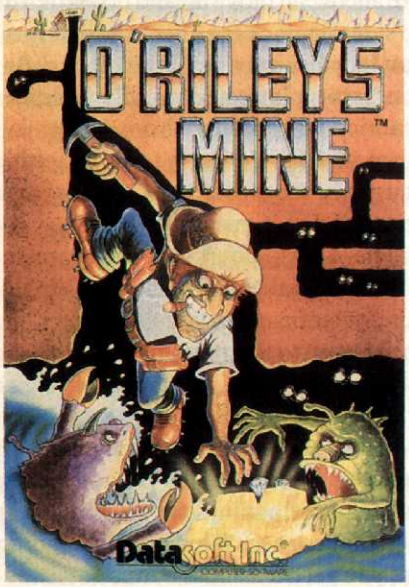
But, now that Activision has made their cautious entry into the area of computer games with this title, it is my hope that their next release will be something more original that takes full advantage of the graphic and gaming abilities of the Atari computers. If anyone can do it, Activision can.

—D.P.

O'RILEY'S MINE

(Gentry/Atari Disk and Tape)

O'Riley's Mine is a good game. And although it was released before Atari's Dig Dug, it does bear some strong similarities. The object is to take O'Riley through his underground mine, capturing the treasures buried there. As he



travels through, he makes a path, not only for himself, but for the numerous underground baddies pursuing him.

Making it more difficult, an underground well opens, forcing water up the mine shaft and through the passages which O'Riley creates. The water rises to the highest level O'Riley has dug. In order to get from one side of the mine shaft to the other (and treasure is *always* on both sides), he has to go over the exposed shaft, and its slow moving water. Therefore, staying low is a critical strategy.

As in Dig Dug, your miner has bombs which can delay the approach of the pursuers, but not the water. There is no way to inflate O'Riley's pursuers—your only way out is to avoid them. When you succeed in gathering all the treasure, a return to the top of the shaft gets you into the next level. If you like Dig Dug, but want some variety, O'Riley's mine won't disappoint in the area of game play.

Making the game more interesting is the catchy music that accompanies your quest through the mine. On the whole, O'Riley's mine is a well conceived, well executed game—one which you shouldn't soon tire of.

—M.B.

ROSEN'S BRIGADE

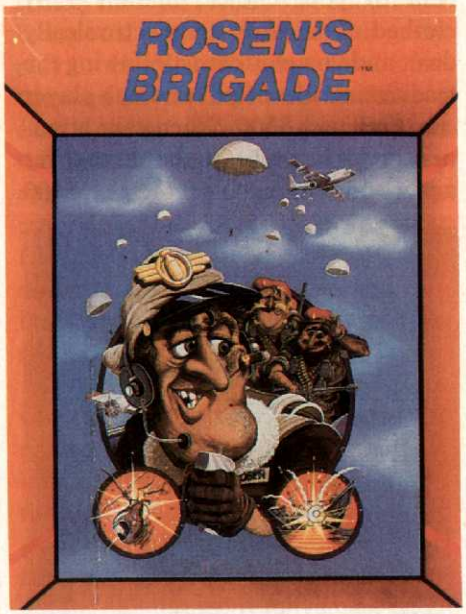
(Gentry/Atari Disk and Cassettes)

From the title, you would suspect that **Rosen's Brigade** may have something to do with some form of Irsaeli-Arab conflict. You would probably be right. Wisely, the designer of this game omitted any national markings, and didn't identify any *specific* enemy.

The object of the game is to shoot down enemy planes, and to rescue your parachutists who are dropping from the sky. (This is a nice departure from Time Pilot which actually *rewards* you for shooting down helpless parachutists). You have a two-sided, scrolling landscape, with water and a desert landscape on the right screen, with mountains between them. At the early levels, your only opponents are of the airborne variety (planes on the left, choppers on the right). On the whole, they aren't that aggressive at early levels, and aren't extremely difficult to shoot down.

At higher levels, you are also pitted against seacraft and tanks. Shooting them down is worth extra points. In fact, shooting anything that moves (except parachutists) is worth points. A good example of the techniques of sandwiching layers of graphics is seen in the mountains, which your aircarft actually flies *through* (behind the ones in the foreground, in front of those in the background.

Although Rosen's Brigade isn't going



to be an earthshaker, it's a fun game, with rapidly increasing difficulty levels. And it is rather habit forming.

—M.B.

STRIP POKER

(Artworx/Atari Disk)

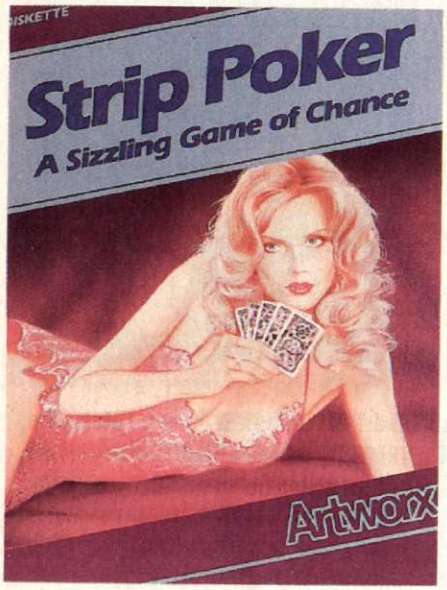
Card games for the computer have traditionally not sold well. If you *have to play* cards, a computerized opponent may be good, but probably not as good in improving your skills for that big match as a real life opponent would be.

Part of the reason for this is that the computer behaves according to some well derived formula, a human opponent is free to make mistakes, and allows a certain degree of variety beyond the computer's system. And unless you really *love* your card game, having a computer for an opponent can get boring. (Besides that, you may win a million bucks from the computer, but try to get it to pay.)

Strip Poker is an interesting variation, providing immediate "rewards." If your fantasies involve seeing a high resolution, computer drawn female disrobing, then this game's a definite winner. (According to Artworx, they will soon have available a "data disk" which will also have the data for a couple of male opponents, plus some more females). Aside from a marginally interesting concept (not that Strip Poker isn't fun, Marvin and Tammy put it well when they said "ain't nothing like the

real thing"), the game is really rather good.

At the top of your screen is the opponent of your choice, initially fully clothed. The cards are electronically dealt and you play cards following the traditional rules of poker. Each player starts out with $100. When your opponent drops below $100, she has to offer a piece of clothing to get the next $100



to play with. If she loses, off comes the blouse, etc. To be on the fair side, this play also expects you to offer some clothing if you run out of the chips.

Your opponent also has a personality, using some choice expletives when she loses big, just as a human opponent probably would. If she wins back the money, she also wins back her clothing. In all, the goal is to completely disrobe your opponent (depending on your skill and luck, this could take quite some time). If you don't want your parents /kids to see what you're playing, there's a modesty switch, which puts the clothes back until the intruders leave.

Strip Poker is a basic language program, requiring the basic program cartridge to play. It is a great party game, as much fun for the player as it is for the over-the-shoulder watchers. It's also fun to play alone.

—M.B.

JUMPMAN JR.

(Epyx/Atari Cart)

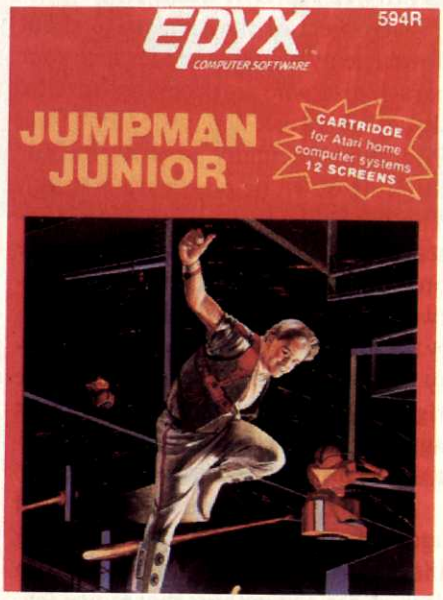
Jumpman Jr. is an excellent game. Both in the Atari version and the Commodore 64 version. Unfortunately, in order to play Jumpman in either version, you need a disk drive to load into your computer and expanded memory.

This requirement leaves out owners of the standard Atari 400 (not enough memory), and owners of the Atari 800 without a disk drive. The problem isn't unique with Jumpman Jr., however. Much of the better software requires the disk drive for speed of loading, and the extra memory for complexity of the programming.

Epyx did something smart. They took the graphics and story line of Jumpman Jr., reduced the number of screens from 30 to 11, and produced an excellent cartridge game for the unexpanded, standard Atari 400 and 800 (and probably 1200 also).

To describe the graphics is simple: You have to maneuver your jumpman through numerous grids, picking up bombs, and avoiding the obstacles. As simple as the description is, *beating* the game is extremely challenging. Each screen is dramatically different from all the rest, the action involved is different, obstacles change, etc., so that what you end up with is the equi valent of eleven distinct games. Each level requires extensive practice and learning of the ins and outs of that particular level, because it often *changes* on you while you play (if you pick up a certain bomb, it may cause other parts of the structure to disappear or become completely inaccessible.)

If you had a choice, you should go with the original Jumpman (or Jump-



man, Sr.). But since you may not have a choice, Junior is a great game, better than many others which don't offer nearly as much.

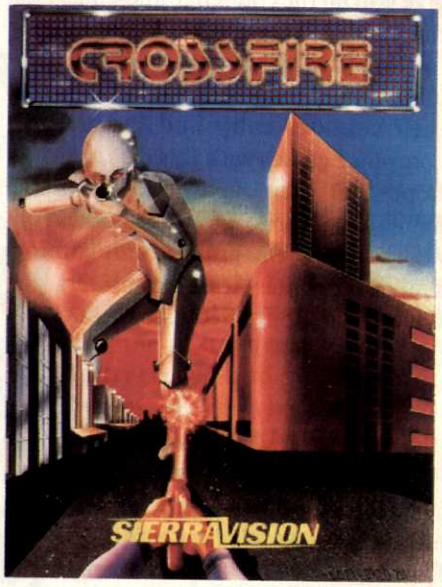
—M.B.

CROSSFIRE

(SierraVision/Commodore 64 Disk)

If it hadn't been for a few things, **Crossfire** would have been one of the few games to receive a top rating. It's easy to learn and a real headache to play. And you can easily lose hours trying to master it.

The concept is different from most other games, and works quite well. Aliens have taken over your city (actually a grid of boxes, 6 high by 7 wide). You are able to maneuver through the center of the city, and the aliens have complete access, starting out hiding behind the



boxes (buildings?) until they make their move to shoot or pursue you. You and the aliens can move up and down or side to side. To duck the alien's bullets, you can hide behind one of the blocks. But the game play very rapidly becomes frantic, with aliens shooting at you from all sides. You have to avoid getting caught in the crossfire as bullets come from all directions.

The aliens don't die all at once, either. It takes five hits to finally eliminate them. Each time they get hit, they return to their original place on the edge of the city, in an even uglier transformation. You start each game with 3 weapons, and each round has 35 missiles. When you get down to your last ten, a reloading station pops up at a distant corner. While all this is going on, you get occasional bonus dots moving out of their blocks into the streets. The blocks go back if you don't get them within six shots.

The game can become very frantic not to mention frustrating. The music

which accompanies the game is even more anxiety provoking, sounding very much like something Henry Mancini may have written for an adventure show. If the music and game play become too much, you can turn the music off.

Now for the weaknesses: The controller performs a dual function—it moves your player through a grid, and it also shoots the missiles. Invariably, when you are trying to shoot an approaching alien before it shoots you, instead of firing the missile, you move right into it. There doesn't seem to be any really good method for knowing *exactly* when you will move and when you will shoot. One thing that works, however, is finding a good corner and holding down the fire button. The missiles won't fire until you move your joystick in the direction you want the missles to go (or, in this case, holding down the trigger activates the firing device and stops movement, moving the joystick actually shoots the missile). When you aren't holding the fire button, your joystick movements are supposed to move the shooter.

With the above exceptions, this one player game is quite a dazzler. There is one other feature which the designers probably never even imagined. Many of the Commodore 64s out there are troubled with a problem called "Sparkle": The blinking of lights on the screen where there shouldn't be any blinking. In some cases, sparkle has been known to cause programs to bomb. It is a definite defect which Commodore has done some things (but not enough) about.

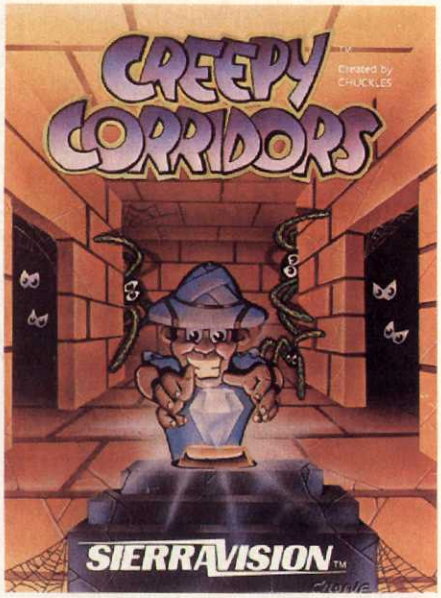
The options screen (accessed through the F3 button) is a great test for sparkle. On my machine, it's terrible. On a 64 at my friendly, neighborhood computer store, his display is sharp and clear. If you haven't yet bought a 64 but plan to, have your dealer boot this game up as a sparkle test before you buy the computer. If your 64 is under warranty, run the test yourself (you may be able to exchange yours for one without sparkle). If the warranty is out and you've got sparkle, sorry. —*M.B.*

CREEPY CORRIDORS

(Sierra On-Line/VIC-20 Cart)

The standard maze game setup: A hero, tons of goodies to grab, and a few heavies to make life difficult. Sierra On-Line's **Creepy Corridors** for the Commodore VIC-20 is another maze-based treasure hunt, but with a twist: Here prizes are few and the paths are teeming with bad guys.

Through nine mazes of increasing difficulty, you use your joystick to maneuver your man to grab the diamonds that are tucked into each of the



four corners of the screen. Pursuing you are an assortment of "creepies," creatures that move in more or less random patterns through the corridors. You can try to dodge these guys, which is a little difficult since, at higher levels, there are as many as twelve of them moving through the maze at one time. Sooner or later you're going to have to hit your action button, which fires your gun in the direction you are moving. Any creature that you shoot disappears for the rest of the round. The exception to this rule takes the form of skulls, creatures that are slightly more intelligent than your garden variety creepy, and are also invulnerable to attack. Skulls start turning up in increasing numbers following the fourth round.

Grab all four diamonds, and a door appears at the far right that will lead you to the next maze. However, if you shoot all the creatures in a round before picking up all the diamonds, then those diamonds that you have not grabbed will disappear, and you will have to proceed to the next maze in order to gain more points. You start off with four lives, and are awarded a bonus life every time you can grab all four diamonds in a maze.

Like Sierra On-Line's other games for the VIC, Creepy Corridors is a strictly no-frills affair, with simple but functional graphics, sound and game play. In fact, the game may be a bit too trimmed down. There's no time limit to each maze, so there's also no reason in the first four rounds not to loiter in a convenient hallway and ambush the creepies as they come to you. Designer Don McGlaflin has even helped you to do this by programming in the ability to freeze your man's movements by hitting the space bar.

The creepies may be plentiful, but with the exception of the skulls, they're not very bright. And when the maximum number of creepies are moving through the corridors, the slowdown in game play is quite noticeable, a tip-off that the VIC's CPU can no longer handle the simultaneous movement of all the characters on screen. It would also have been nice if a way of selecting difficulty levels were included, since the earlier rounds are too easily mastered. Joystick control is responsive and, as in most On-Line games, you can also use the keyboard for control, although it is not as convenient.

Mr. McGlaflin may have bitten off a bit more than he could chew with Creepy Corridors, as far as the capabilities of the VIC are concerned. The game, especially in the higher levels, is intriguing, but a bit more could have been done with it. Still, with its intricate winding hallways and larger number of antagonists, Creepy Corridors makes for an entertaining, if unexceptional, variation on the maze shoot-out theme.

—*D.P.*

RUNWAY 20

(Susie Software/VIC-20 Cart)

Runway 20 is a flight simulator game. You look out your cockpit, monitoring your numerous instruments, attempting to fly into a designated airport. The only view you have is a horizon indicator, which lets you know which way your plane is leaning.

This game is *not* for everyone. First, it requires a 16K memory expander. Second, unless you have a disk drive, it takes a long time to load. Third, it really isn't much graphically. And fourth, as is probably the case with most

airplanes, the controllers are painfully slow.

As a simulation, however, it probably does a pretty good job. I say probably because it really wasn't easy to get very involved in the action. To successfully complete your mission, you must continually monitor such things as airspeed, heading, aileron, whether your landing gear is up or down, altitude and pitch. It's a lot to keep track of.

You can use either the keyboard or joystick (or both). Using the keyboard is supposed to provide more rapid response. Either way, the controls are s - l - o - w. In order to fly in the appropriate heading, you have to bank the plane in the desired direction until a compass heading blinks. To get the plane to stop banking, you have to anticipate the exact location of this heading well in advance in order to stop banking. I found this extreme delay and the virtual nonresponsiveness of the controls to be a somewhat fatal flaw in what could have been an interesting simulation.

Although the attempt to cram as much realism as possible into a VIC-20

package is an admirable one, the unresponsive controls appear to be a major weakness. Slow response in an airplane may be predictable and acceptable. Unpredictable response on a video screen, however, isn't acceptable. —*M.B.*

SKRAMBLE

(Microdigital/Commodore by Disk)

Skramble is an unlicensed version of a gem with a very similar name. The object of this version of "scramble" is to fly your craft through an increasingly complicated, horizontally scrolling landscape, destroying as much enemy machinery as possible, while at the same time surviving all the stuff they shoot at you.

Your ship shoots bullets and drops bombs simultaneously. It also does a good job of running directly into walls

and things (operator malfunction). The graphics and sound are good, and the game is challenging enough to keep even the most experienced gamer quite busy. There are eight different sectors, each one increasingly difficult. If you run out of fuel, you lose one of your three ships. To refuel, you must destroy the fuel dumps which are scattered throughout the spacescape.

One of the nicer features of this game is the attract mode, which takes you through all eight levels of the structure. By studying the scenery as it develops before you, you may gain a slight edge before actually trying out the game.

Skramble is a good game—graphically complex, challenging, and enough like Scramble that you might not be able to tell much difference. If you like Scramble-like games, this version won't disappoint you.

—*M.B.*

BC's QUEST FOR TIRES

(Sierra On-Line/Atari Disk)

At the Summer Consumer Electronics Show, Sydney Software was stirring up no small amount of interest with two of their games: Evolution, and **BC's Quest for Tires.** Evolution is doing fairly well. Quest may have more market potential.

Probably in an attempt to bring their company out of the stone age, Sydney has licensed the game to Sierra On-Line, a company with better means of distribution. Quest for Tires is strongest as a graphic game. The game involves the characters from the BC comic strip: Thor, Fat Broad, Cute Chick, a hungry dinosaur, and other prehistoric nasties. The object of the game is to guide Thor, aboard his unicycle, across a difficult landscape that is littered with high and low branches, ruts in the road, a lake with diving turtles, and many other obstacles. The game is somewhat reminiscent of Pitfall, since the entire game is concerned with maneuvering Thor through this scrolling maze.

Game play is good, but it's really the graphics that make this game. When Thor screws up (and he does this often, until you learn the landscape), he gives a "why me?" look before tumbling over, wheel flying out from under him. This is a game that, even if you've mastered it, is fun to play just for the sake of watching the action.

If you want a game that is fun to watch and fun to play, even when you've solved it, BC's Quest for Tires is a good choice; it's really a neat little game.

—*M.B.*

POOYAN

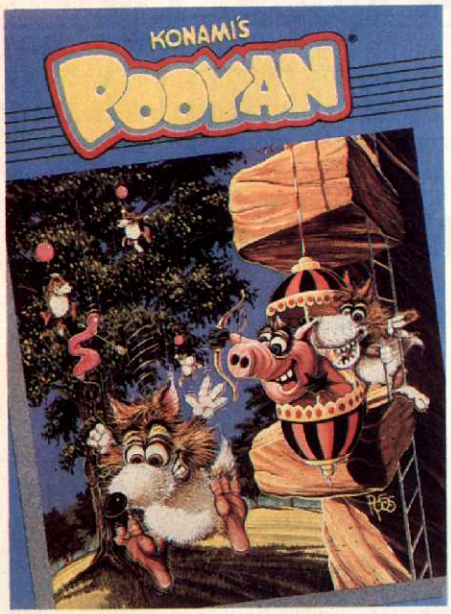
(DataSoft/Atari Disk or Tape)

DataSoft seems to have struck gold, partially as a result of licensing good arcade titles. Zaxxon for the Atari computer was one of their games, and it's still reportedly doing well. Konami's **Pooyan** is another attempt by DataSoft to bring arcade-quality graphics and game play to the home computer.

The box, advertisements, and documentation all look very nice. The game graphics are also pretty good. Everything is real colorful. And it isn't an easy game to master.

The basic conflict is between your pig and a bunch of mean wolves who are attempting to destroy your pig. (Your pig, by the way, is only trying to rescue other pigs from the clutches of the evil wolf.) Pooyan has two game screens and two bonus screens. I can't tell you what the second and later screens look like, because I haven't yet been able to knock out the first 38 wolves.

The game is accompanied by a continued, repeated playing of what I think is Humoresque. No matter. If you get tired of the same song over and over, there is a game toggle that allows you to



turn off the music if you want.

Pooyan is a difficult game to categorize. It is a whimsical game, with a pretty unique concept. Game play is challenging, and can be played by one or two players. Again, my stock statement: If you liked the arcade version, you'll probably like the home game.

—M.B.

MOONDUST

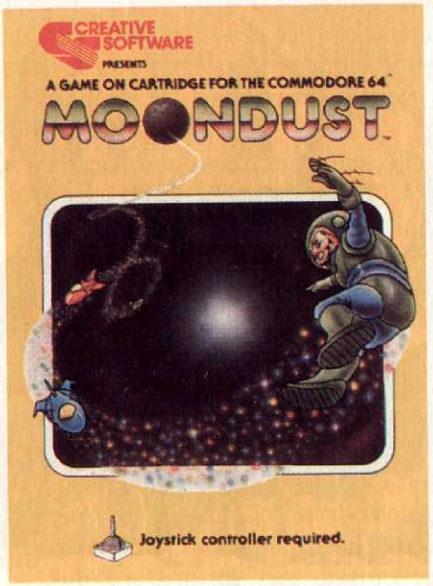
(Creative Software/
Commodore 64 Cart)

Creative Software must be commended for their courage in releasing **Moondust.** Not because it isn't good, but because it defies the categorization usually given to software. It is a game, but it isn't a game. It isn't a maze game, there isn't really a playfield, nobody gets shot, you don't get a cute little musical jingle, in fact, it is a game of abstracts with virtually no resemblance to anything before it.

The game takes place against a black background, with your astronaut and six spaceships lazily leaving colored trails on the screen. After a while trails start to twinkle and finally disappear. When the objects on screen reach the top, bottom, or sides, they turn either clockwise or counterclockwise on the screen. You might get the impression that you are staring at some microcosm through a microscope—that instead of space creatures, this is a drop of protoplasm on a microscope slide (the old sperm and egg example seems a close approximation of what happens on screen).

By altering the direction of your joystick, you cause your astronaut and the ships to turn in that direction. Pressing the trigger alters the direction that the characters turn when they hit a wall (clockwise-counterclockwise). If you press the trigger when your astronaut is near enough to the edges of the screen, a "seed" is deposited on the screen and a target (also resembling an unfertilized egg, or an abstract bull's-eye) appears in the center of the screen.

In all the maneuvering around, you must protect your astronaut. If his head knocks into the ship too many times, he



is knocked out and that round ends. You have three seeds, but get a bonus seed for each bull's-eye. Once you are out of seeds, the game is over.

One of the important aspects of this game, aside from the abstract, hypnotic visuals, is the music accompanying the action. The music consists of almost random, pleasant musical tones, which are controlled by the game play. Depending on what you do with the controller, the notes can be more or less similar to each other, and the pitch can be raised or lowered. As long as you continue playing, the tones don't become annoying—but leave the game on automatic for too long, and it gets repetitive.

There are variations in game play; one version has the seed rushing off screen if you don't get it fast enough, another gives you less control of the ships, still another gives you the game without any scoring information.

Moondust is an entirely unique addition to the pile of available software. Unlike most games, which seem to induce anxiety, the idea behind Moondust is to relax and enjoy it. Moondust is a game designed to be played in a darkened room with the sound coming from a good stereo system. *—M.B.*

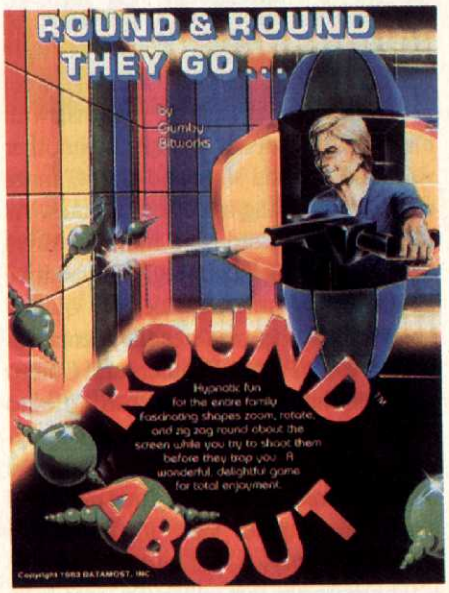
ROUNDABOUT

(Datamost/Apple Disk)

Roundabout is a game that already has been made in at least two formats. I don't know if the Panasonic computer version has made it to market (or ever will), but the Apple version deserves its place in many homes.

To play the game, you maneuver your shooter around the inside edges of a square. When you shoot your weapon, it shoots in towards the opposite side of the square, stopping about halfway in. At the inside of the square, a variety of weird-named, and often oddly shaped, attack formations come after you. Each formation has a different look and a different name, and follows a new pattern. If you don't eliminate them all rapidly enough, a spinning face comes after you. Contact with anything, of course, is deadly.

As you complete a level, you occasionally get some response from the computer (Awesome and Golly seem to be its favorites). The game is fun for everyone. Nobody gets hurt, although the thing requires strategy and rapid reflexes.



Roundabout has the potential of becoming a big winner. It's good, clean fun. *—M.B.*

SOFT SPOT

New Beginnings for the New Year

By Mark Brownstein, Dan Persons, Mike Sittnick

And so, we bid a fond farewell to 1983, and good riddance! To nobody's surprise, '83 was the year of the big shakeout, when companies that relied on the premise that gamers buy on the basis of a famous name and a flashy ad campaign saw the errors of their ways. . . too late. When the dust had settled, Data Age, U.S. Games, and Games by Apollo had all folded their tents for good. Even an innovative firm like Imagic found the atmosphere so hostile that they decided to retreat from marketing their own games and concentrate on game design for other companies.

The bleak outlook was well-reflected in the way games for the Atari 2600 were released during the year. Pickings were very lean for the first six months, with many games merely being just another variation on the slide-and-shoot, maze chase, or scrolling shoot-out themes. As the year progressed, and manufacturers caught on to the increasingly competitive nature of the marketplace, the quality and variety of games steadily increased. While Atari, Parker Brothers and Coleco relied on the strength of licensed titles to attract gamers, all manufacturers struggled, in a variety of ways, to squeeze multiple screens, complex game play, and elaborate graphics out of the 2600's limited memory.

The result was that, while 1983 may have been disastrous from the viewpoint of the industry, the discriminating gamer had the choice of a good range of quality games.

Enough dwelling on the past. Here is 1984, and we've got some choice selections to kick off the New Year with.

—Dan Persons

WORM WHOMPERS

(Activision/Intellivision)

It's nice to see that there are still a few companies making new games for the Intellivision. **Worm Whompers** from Activision is a good addition to the heap.

From the box, it's pretty easy to tell that Whompers will be fun. The cover features the classic painting, American Gothic (the farmer and his wife) and a whole bunch of cute bugs crawling all over them.

The story goes like this: The farmer didn't harvest his corn before the bugs had a chance to converge on his field. Now he's got to fight them off if he's going to harvest any of his corn.

The game is something like a space invaders game flipped sideways. At the left of the screen are the ears of corn. From the right, the attackers come: big worms, small worms, butterflies, moths. As a rule, if it slithers, it'll probably show up. Before too long the action becomes very hectic as you maneuver your farmer to shoot as many bugs as possible. He's got bullets and bug bombs to use against the bugs, but eventually it becomes no contest. The bugs win. And when they do, the corn gets sick, turns brown, and finally disappears.

But don't feel too sorry for the poor farmer. He's had a good time trying to defeat all those beasties. And his corn will all return as soon as the game is reset.

Worm Whompers is good, cute fun. (I'll resist "corny" puns about the game not "bugging" you—that's too cheap a shot.)

M.B.

BEAMRIDER

(Activision/Intellivision)

Where **Worm Whompers** was a winner based on fast play and cute graphics, **Beamrider** may do well because of good, space graphics. The object is to ride your beamrider along the beams that connect a space station with earth. The beams run in a nice perspective view, getting close together near the top of the screen. Along those beams come attacking alien vessels. Your task is to destroy those ships before they get past you or shoot your ship.

The action is very fast, as each wave of fifteen invaders comes riding the beams toward you. You have to position yourself on the correct beam and fire a laser lariat (or one of your three torpedoes per wave) at the attacking device. If you destroy all fifteen, you advance to a newer, more difficult wave.

Beamrider is a rapid, graphically stunning game. I would not be surprised if, once you've stopped oohing and aahing the graphics, the game might rapidly become just another space game in your closet. If you like fast space games, you should get a few hours of enjoyment out of this one. *M.B.*

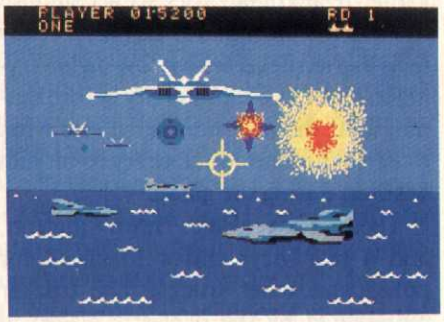
SUB-ROC

(Coleco/ColecoVision)

Sub-Roc-3D was something of a novelty in the arcades. It was the first attempt at a real three-dimensional video game. The effect was not as bad as its dismal popularity in the arcade would imply. Perhaps it was just too intimidating for the average quarter-pumper. Well now the game has been brought home in the form of a ColecoVision cartridge, minus the 3D.

Sub-Roc is *still* a very good game. The player can fight at or below sea level, or in the sky. The "SUBmarine-ROCket" can only move up or down and rotate. It is no sitting duck for its numerous enemies, though. It can shoot missiles or torpedoes. Moreover, the view is realistically done from the ship at a "first-person" perspective. Unlike Battlezone, unseen enemies cannot hit the ship.

Perhaps the viewing screen is the only vulnerable part of the ship. The object of the game is to blow up everything in sight. There are slight variations like mystery ships and such, but the action really relies entirely on the "shoot or be shot" theme. As far as pure play is concerned, Sub-Roc is tops.



The enemies range from Yankee Clipper Ships, to Hot Air Balloons, to Air Craft Carriers, to futuristic space ships. It is very amusing to be doing battle with a fleet of flying saucers one second, and trying to peg a Yankee Clipper the next! Not only do the enemies look different, but they move differently. The only way the Sub-Roc vessel can be destroyed is by a missle or torpedo. As the projectile approaches the ship it gets larger. If it is not shot in time it will take up the entire screen and destroy the ship. Incidentally, Sub-Roc has the *best* destruction special effects of *any*, that's right *any* home video game.The screen bursts into yellow and orange and shapes that look like they were taken out of a comic book. The effect, however is strong. The explosion is so convincing that it makes the player want to really show those guys who's boss.

Because ColecoVision cannot emulate the ultra-high resolution, three-dimensional effect, or the color variety of the frantic Sega coin-op, the Coleco home cartridge is not terribly similar in its look. The play action is excellent, however, and it is easier for the player to know what's going on. This is definitely the game for space game fans who want to try something different. Sub-Roc for ColecoVision is the consummate shoot'em-up action game. Even though the graphics are not physically able to emulate the coin-op to a great degree, they are among the best graphics to come from a Coleco cartridge yet. Only Zaxxon and the new sports games have a more pleasing graphic display. Sub-Roc is not for master strategists or cute game fans; but for shoot'em-up fans who want plenty of action, a new perspective on a game, plenty of different enemies and enemy attack styles, and an occasional chuckle, Sub-Roc is the game.

The game also allows different skills levels for each player so that two-player games can be more enjoyable. This is a feature that would be nice to see on future ColecoVision games. With the pause control also included, Sub-Roc has the added conveniences that make it an enjoyable cart in *all* respects for the more violent players. *—M.S.*

LASER GATES

(Imagic/2600)

Released simultaneously with Quick Step by Imagic, is **Laser Gates**. A game that must be about the 927th scrolling shootout. The actual game screen only takes up the upper third of the screen. The bottom two-thirds is taken up by gauges for shields, fuel, score, energy, and "D-time". The player is faced with a pretty tough obstacle course that includes forcefields with tiny, moving holes in them,homing missiles and the like.

It is sort of a two-dimensional Zaxxon. The player's goal is to reach the computer that is threatening the universe before "D-Time" is gone. The computer has the number 6507 on it. That is the type of microprocessor that the Atari 2600 uses! Let's face it, any machine that cannot even create hi-res graphics will not be able to destroy the universe.

This is unfortunate for Atari as the Soviet Union would probably buy a few million 2600s if it had this capability. This confrontation between the little ship and the mighty (?) computer is a big let-down. The thing just blows up. Suddenly, the ship has to fight another one. There is really nothing new to the game. The gauges add little to the overall pre-

sentation because they don't affect how the game is played.

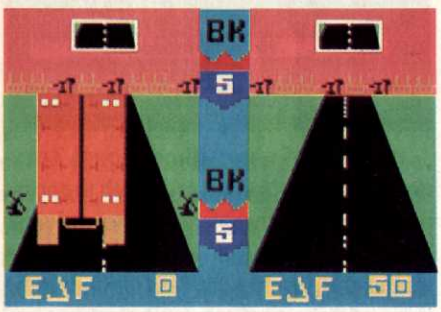
No matter how high or low the shields are, the player is going to try not to get hit. No matter how much "D-time" is left, the player is not going to poke through slowly (unless he falls asleep, a distinct possibility). The gauges are a waste of two-thirds of the screen, and the remaining third houses a game theme that has not only been thrashed into the ground, but has more taken away than added in this rendition of the theme. This one is only for 2600 owners who want to shoot their own machines or for those crazies who must have every horizontal-scrolling shoot-up. —*M.S.*

TRUCKIN'

(Imagic/Intellivision)

With **Truckin'**, Imagic has proven that Mattel is not the only company that can make incredibly complex games for the Intellivision system. The instruction book is twenty pages long, with very few pictures. Extensive use of the keypad and the need for an actual road map makes Truckin' a game that demands the player's full attention. Imagic attempted to make Truckin' an action game, a strategy game, and a truck driving simulation all at the same time. In reality, the game has a good amount of action and strategy, but falls short in the simulation department.

There are two games in the cartridge. One is a cross-country road race between two "drivers." Both choose their cities



from an actual road map, and each driver can travel on the routes of his choice. The second game requires the players to haul cargo, picking up cargo where it is cheap, and dropping it off where it is expensive.

In both games, drivers have to worry about speeding, which attracts police; missing an exit; getting lost; running out of gas or money; taking rest stops occasionally; and avoiding accidents with other truckers who for some reason are driving the wrong way down an interstate highway.

This game can be quite enthralling if time can be taken to understand it and practice it. Truckin' can take up to two hours to play, and the action is very much unlike other race games. This game, if anything, tries to accomplish too much. One minute, the player really feels like a trucker who is low on gas trying to make it to the next city before running out; the next minute he sees what must be the tenth truck to try to hit him head-on during the game.

There is a realistic "horn" button, and a rear view mirror to check for police and other trucks. The trucker represented by the player is placed in "action game" situations in what would have worked better as a pure strategy/simulation. There are also some inconsistencies; if the driver slows down to zero to avoid a head-on collision, the other truck will slow down as well. But if you speed up, the truck will continue mindlessly changing lanes in the wrong direction. Even a rest stop will not always make it go away.

Truckin' is an honest attempt at a serious strategy/action game. It is very good for those willing to take the time to learn it. Above all, despite some inconsistencies in play, it remains very entertaining and very challenging for the *advanced* video gamer, more so than for practically any other game. —*M.S.*

MR. DO!

(Coleco/ColecoVision)

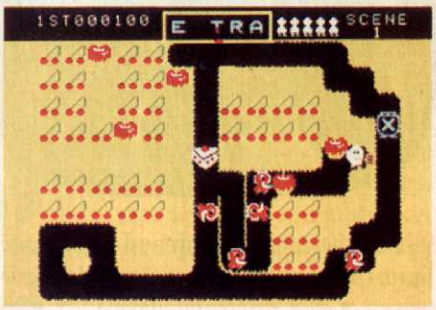
Coleco is very fortunate to be able to release **Mr. Do!** at the height of its popularity in the arcade. As of this writing, the game is number five in the country. It is also the first big hit from Universal, who is also responsible for the critically acclaimed Ladybug and Space Panic, as well as a slew of total unknowns like Cosmic Guerilla and Cosmic Monsters I & II.

Mr. Do! is almost a type of 'Dig-Dug Deluxe.' Like Dig-Dug, the player is digging tunnels and is being constantly chased by predators. Instead of an air pump, Mr. Do! is armed with a power ball to fight with. Instead of rocks to drop on his adversaries, Mr. Do! has apples.

The power ball is rather interesting because if Mr. Do! misses his target with it, it will bounce all over the maze until it hits a monster or comes back to Mr. Do! If Mr. Do! grabs the prize in the middle, all of the monsters on the screen freeze. A new set of monsters enter the screen. One of the monsters is a letter with legs and eyes. Destroy the letter and it is lit up to complete the word "EXTRA." If all five of the letters in the word are hit, the player wins a free Mr. Do!.

Mr. Do! can clear a screen by either running through all the cherries on the screen, much in the same way as Pac-Man clears a screen by eating all the dots, or by eliminating all his enemies, or by spelling extra or getting the diamond bonus.

In the original arcade game, if an apple fell and split into a diamond, the player could get the diamond and a free game with it. Of course, the home player has little use for a free game, so Coleco designed it so that the player just gets 10,000 points and a new screen instead.



Coleco's rendition of Mr. Do! is a good one. It isn't a perfect clone of the arcade version, though. The Mr. Do! character is only a white figure in the home cart while he looks like a fully detailed multi-colored clown in the arcade version. The intermissions are gone, and the monsters are not as aggressive. Sometimes it is difficult to move Mr. Do! properly when he is next to an apple.

What makes Mr. Do! a solid cartridge, however, are the elements that are retained. The music is practically identical to the coin-op. The home game is also very colorful. After all, any game with a name like *Mr. Do!* should be very light.

Mr. Do! is significantly worse on the home screen than in the arcade, but it is still a very entertaining video game and can be recomended to both coin-op Mr. Do and Dig-Dug fans. —*M.S.*

MOON PATROL

(Atari/2600)

Imagine that you're out for a quiet Sunday drive across the Sea of Tran-

quility. The lunar terrain is rough, pitted with giant boulders and small craters in Atari's pleasant adaptation of **Moon Patrol** from William's for the 2600 game system. Your rover, however, is well equipped for such obstacles. As the scenery scrolls from right to left under your treads, you can blast the boulders as they draw near you, by pressing the fire button to activate your front-mounted cannon. Or you can leap over the craters by pressing your joystick forward.

Everything would be just rosy if you could just keep your eyes on the road but once you cross a subterranean "X," you're suddenly in alien territory. Before you can say "Neil Armstrong," spaceships are crowding the sky above, trying to drop bombs on you. Fortunately, you're equipped for these guys with a press on the same fire button not only shooting blasts forward, but also sending multiple shots upward.

If all else fails, you can try to dodge the enemies' blasts by using the joystick to move your rover back and forth across the left half of the screen. Make note, though, that moving your rover to the far left reduces its speed, while bringing it to the center accelerates it. If you're going too slow, you'll also find it impossible to leap craters. Move too fast and you may not be able to clear all the boulders out in time to avoid calamity.

Make it successfully through one course before a set time limit runs out and you are awarded bonus points. There are five courses altogether, each one varying in the type and number of ground-based obstacles and the aggressiveness of the aliens. You start out with three rovers and are awarded bonus rovers for each 10,000 points earned. There are three player selectable skill levels, including a slightly simplified children's level.

Atari has had to excise a few things that were present in the William's coin-op game, most notably the lunar city. Nevertheless, this version of Moon Patrol remains faithful in spirit to the original. The simplified graphics still retain a degree of perspective in the scrolling scenery, with the hills and stars in the background moving at a slower speed than the foreground objects. Some distinctive sound effects have been provided, especially the explosion of the boulders, which sounds like the rim-shot on a snare drum, and the noise the aliens make upon entering the gamefield, which is somewhat reminiscent of the "beeoowup" noise that ended many a Looney Tune. And if you tire of the music track, which is nothing but a repetitious bass line, a flip of the left difficulty switch will silence it, a welcome and long overdue feature. With your attention divided between watching for obstacles on the road and dodging alien missiles from the sky, game play is quite involving. The "children's" level is a good way to get the hang of the game, but even this level is challenging enough to hold most players' interest.

Moon Patrol turns out to be an unusual combination: A shoot'em-up that is also pleasantly charming. This is doubly surprising since its creator, Williams Electronics, is not known for designing light-hearted games. Atari has captured the upbeat spirit of the original in this version while keeping the game sophisticated enough for even seasoned gamers. —*D.P.*

JUNGLE HUNT

(Atari/2600)

Taito America is probably glad that they didn't put a voice synthesizer into their arcade game Jungle King. If they had, no doubt the estate of Arthur Conan Doyle would have forced them to change the soundtrack to announce "Me not Tarzan, you not Jane." As it was, the Doyle estate was successful in making Taito change both the title of the game to **Jungle Hunt** and the representation of the main character from a loin-clothed ape-man to a safari-hatted explorer.

In this one-player game you must rush your intrepid explorer, Lord Dudley, to the rescue of his beloved Lady Penelope. In the first screen, you use your joystick's fire button to swing from vine to vine across the jungle. In the second screen you must swim a river stocked with alligators. Or are they crocodiles? Whatever, they're hungry and will quickly have Dudley over for lunch unless you can either maneuver him around them, done by guiding him up, down, left and right across the right-hand half of the screen, or use the action button to cause Dudley to stab the aquatic reptiles with his knife. The swimming reptiles are vulnerable only in their mouths, though, and you had better watch those mouths closely. When they are closed, a successful stabbing will net you one hundred points, when they are partially open you get 200 points, and when they are fully open it's chow time and you'd best get Dudley out of there as fast as possible. Meanwhile, keep your eye on the oxygen indicator on the upper right. If it runs down, you must guide your explorer to the surface to replenish his air supply. If he runs out, or if he collides with an alligator then it's curtains for Dudley.

In the third screen you must maneuver Dudley back and forth across the right half of the screen while using the action button to leap small boulders that roll across the terrain. The occasional large boulder can be ducked under by pulling the joystick towards you. In the fourth screen you encounter a spear-carrying native who dances in the center of the screen. Leap over this guy without getting impaled and you then confront his twin brother. Get past him and you both save Lady P. from a horrible fate, and are awarded bonus points according to how fast it took you to accomplish the rescue.

There's no denying that all the stops have been pulled out to bring Jungle Hunt home. As befits Atari's most recent efforts, the graphics are wonderful. The scenery in all screens scrolls with a realistic sense of perspective, the foliage in the foreground moving slightly faster than that in the background. Animation is smooth and characters such as Sir Dudley and the natives are well detailed. But Jungle Hunt's game play is strangely unbalanced. The vine and swimming screens are ridiculously

easy, so easy that I breezed through them on my first attempt without even the aid of an instruction book. Setting the game on its second, higher difficulty level helps a little, but not enough. You can practically do these screens with your eyes closed, and that's a bore. However, if the first two screens are a piece of cake, the boulder and native screens are considerably harder. Dudley almost always seems to fall victim to the large boulders, and I have yet to get past the first native. This could be my failure in missing the pattern to the native's leaping dance, or it could be that the game sets its goals too high in these screens. In either case, poor Dudley invariably winds up as shishkebob on the native's spear, and sweet Lady P. has yet to be rescued.

Jungle Hunt is beautiful to behold, but its lopsided game play, which jumps from boringly simple to unyieldingly hard without a pause, cuts down on its enjoyment. Those people with a fondness for the arcade game will probably be the happiest with this version. The adaptation is accurate enough and, set on the higher difficulty level, should keep fans of Sir Dudley reasonably satisfied for quite a while. *—D.P.*

KRULL

(Atari/2600)

Did you see **Krull**? The fact that this crossbred sword-and-sorcery/science fiction flick didn't attract hoards of paying customers doesn't exactly break me up. It might have the people at Atari a little worried, though, since they're the ones who licensed the film for translation as a game for their 2600 game system.

The first screen of this one-player game takes place during the ceremony where the noble Prince Colwyn is to wed "his beloved Princess." As Prince and Princess walk up to the top of the screen, the festivities are interrupted by some of the meanest gate-crashers ever seen: Hoards of robot-like Slayers who march down to intercept them and try to capture the Princess. As she drops back down to the bottom of the screen, you must use your joystick to guide Colwyn through the ranks of invaders, eliminating each Slayer by simultaneously touching it and pressing the fire button. Meanwhile, you have to avoid the glowing neon spears that are carried by some of the warriors and, when thrown, travel either diagonal or vertical paths down the screen. The more Slayers you kill, the faster they become, until one finally makes it to the bottom of the screen and carries off the Princess.

The next scene is a transitional sequence showing the Prince galloping to the rescue on his Firemare. If you have scored at least five hundred points in the first screen, you will also pass by a star-shaped "glaive," the Prince's weapon for his final confrontation. This device can be picked up when it changes color by pressing the fire button. It's then on to the web of the Crystal Spider. Here, in order to make it to a rectangle at the top center of the screen, you struggle past shimmering strands that spread outward from the center and avoid the Crystal Spider that wanders randomly across the web. You have no weapons, but pressing the fire button causes the Prince to leap, a function that you will be using often in this screen. Once at the rectangle, a flashing cursor will indicate one of eight exit points at the perimeter of the screen. You must then maneuver

the Prince back through the to the exit point and face him outwards to move on to the next challenge. During this screen, you must keep your eye on an hourglass located at very top. If the sands run out before you can reach the rectangle, the Crystal Spider will become annoyed at your presence and waste no time in devouring you. Care must also be taken that you don't face the Prince outward before he reaches the rectangle, since this will prematurely expell him back into the Firemare screen. You may be able to pick up an extra glaive or life when this happens, but you will also forfeit a life and be returned back to the spider screen.

Escape in one piece and you gallop to the Black Fortress, home of The Beast, the creature who stands guard over the cell where the Princess is being held captive. Here you must dodge the fireballs of The Beast and free the Princess by playing yet another variation of our old friend, Breakout. In this case, you must hurl your glaive at the prison wall, knocking it out brick-by-brick, and then catching the glaive as it returns to you. The glaive is steerable as it ascends, but once a brick has been eliminated, it travels back down in a straight line. Knock a hole through the wall and the next shot will literally beat a path to the Princess, who rushes offscreen. One more well aimed shot will eliminate The Beast and start the game over on the next highest difficulty level. There are four player selectable skill levels in all with level two being the simplest and level four the most difficult. Colwyn starts out with three lives and gains a life if it can be found and picked up during one of the firemare sequences.

Considering the failure of the film at the boxoffice, Atari was smart enough to make their version of Krull stand on its own. No lackluster E.T.-style game play here, the action is fast and the screens are varied enough to keep the game interesting. Each sequence moves the plot along, with even the transition screens serving the purpose of allowing the player to pick up extra lives and weapons.

Possibly the weakest screen is the Crystal Spider sequence which, once you know the secret to getting through the web, is way too easy. Conversely, the final castle sequence, for all it's similarity to Breakout, is quite difficult. The best technique is to move Colwyn to either the extreme right or left of the prison and hurl the glaive as The Beast passes overhead moving towards the opposite end. This almost assures a clear shot without having the glaive being intercepted by The Beast

This game owes practically nothing to the arcade game of the same title manufactured by Gottlieb. Instead Atari has come up an action/adventure game that works quite well whether or not you have seen the film upon which it is based. While I wish they could have come up with something other than another rehash of Breakout for the finale, Krull still stands out as another interesting entry from the "Reformed" Atari. In spite of its inspiration, it's well worth trying out. *—D.P.*

FROSTBITE

(Activision/2600)

Activision, never a company to ignore the voice of the people, has responded

with **Frostbite**, a hopping game that tosses in a few pages from Frogger for good measure.

This one or two-player game takes place in the Arctic Circle, where the protagonist, a chubby little fellow named Frostbite Bailey, must build himself an igloo before he freezes to death. To build the frozen homestead, you must use your joystick to leap Bailey from the shore of an arctic sea onto horizontal rows of iceblocks that float in opposite directions across the screen. Landing on a row of white blocks turns them blue and automatically places another piece of the igloo on the far right of the shoreline. When Bailey has turned all four rows blue, in essence constructing four sections of the igloo, the rows are reset to white. Bailey then continues his

hopping from row to row until all sixteen pieces of the igloo have been put in place, at which time Bailey can be hopped back onto the shore, slid on over to the crystalized condo, and ducked in for some well-deserved rest.

Not that it's so easy, of course. For one thing, a digital indicator in the upper left-hand corner continually ticks off the dropping temperature, starting at forty-five degrees. If it reaches zero before Bailey can find shelter, he receives a rather severe case of frostbite. Successfully making it to the igloo before time runs out will award you ten times the number of degrees left on the counter.

It isn't just the elements that conspire against you. The sea is crowded with King Crabs, Show Geese and, get this, "Killer Clams" that travel the horizontal paths between the ice blocks. If Bailey lands on any of them, they'll latch onto him and slowly push him into the drink. And in later stages of the game, the shoreline will be patrolled by a "Polar Grizzly" bear that shadows Bailey's movements. Bailey can't dawdle too long on the shore, lest he fall victim to this creature's bite.

There are occasionally schools of fish that travel the same paths as the clams, geese, et al. These creatures can be plucked out of the sea by Bailey for bonus points. In addition, you get a bonus life tacked onto your initial four every time you pass a five thousand point level.

Every time Bailey beds down for the night, the game restarts at the next difficulty level. Each level can vary in the speed and unpredictability of your seabound enemies, and also in the ice block configurations, which can go from huge blocks that are widely spaced apart, to blocks that are smaller but spaced so closely together that Bailey can shuffle horizontally from one to another, to blocks that slide trickily underfoot. The player can choose to start at the very beginning, or about four screens into the game.

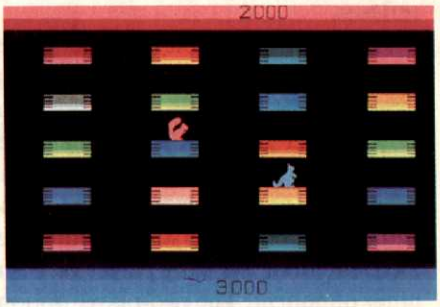
With Activision introducing such technically sophisticated games as Robot Tank and Enduro, Frostbite seems to be a throwback to a simpler time. Designer Steve Cartwright has kept this a basic game, with straightforward rules and uncomplicated graphics and sound. In fact, the only thing unorthodox about Frostbite, in comparison to other hopping games, is the joystick control. Up, down, and diagonals will cause Bailey to jump in the appropriate direction, but left and right only makes him shuffle either way. This can cause some problems, since if you are not accurate in your joystick movements, Bailey will happily slide off an ice block to his doom when you actually wanted to make a diagonal leap to another row. This can be especially dismaying, since diagonal leaps happen to be the best way to avoid falling into the clutches of a seabound creature.

The game play of Frostbite is well varied from round to round, but the total effort, which requires nothing more of the player than safely leaping from block to block, gets to be rather monotonous after a while. Frostbite is probably best suited to those who are absolutely fanatical about hopping games (and those people will want to set the game at the higher difficulty level, since the first four screens are rather easy to get through). For others who are less devoted to the concept, Frostbite's appeal may melt a bit too rapidly. *D.P.*

QUICK STEP

(Imagic/2600)

Quick Step, one of the last games by Imagic to be made for Atari 2600 style systems, is neither the high-powered space gamer nor the aesthetic mythology/fantasy game that Imagic fans have come to expect. In fact, the game is not even very good graphically! Quick Step is Imagic's first (and last) attempt at a



"cute" game. The object of Quick Step is to jump on all of the platforms to change their color. Sounds like you-know-who, doesn't? Well, after the superficial similarities, Quick Step is as different from Q*bert as Galaga is from Space Invaders.

How is it different? For one thing, the playfield is constantly scrolling. If the player is on the bottom of the screen and is carried off, he dies. Because the pattern of the platform changes sometimes, the player may get stuck on a "dead end," he will have to jump down near the bottom and travel up the correct path. The player does not get any points for changing the color of a square until it scrolls off the bottom. This is very significant, because the player, who is represented by a kangaroo, has only one enemy, a purple squirrel who is busily hopping on the squares after the player touches them. The squirrel gets points just like the kangaroo does.

In the two-player version, the second player is the squirrel. In both versions, therefore, absolute point total takes a back seat to beating a human opponent or actually beating the computer. If either the kangaroo or the squirrel jumps on a white platform and touches the rival hopper, the rival is immobilized for a few seconds as the lucky critter who immobilized his rival hops all over the place, picking up points.

The other weapon that can be used against enemy animals is the fire button. If it is pressed while the animal is in mid-air, the platform that he just jumped off

of will disappear. If this is done at the right time, it can trap the opposing animal, because he will have nowhere to jump.

This jumping contest not only has different play-action than Q*bert and its numerous offspring (Artic, Boing!, etc.), but it has a different feel and requires different strategy. The game is not much to look at, but it is lightning-fast. It really lets players test their reflexes.

Although "beatable" home games are becoming more commonplace (e.g. Dreadnaught Factor), this is one of a very distinct group of games that gives the computer opponent the exact same capabilities as the player. Instead of the game being player versus computer created situation, it is truly player vs. computer opponent. The two-player option, which allows two players to compete simultaneously, is particularly well-suited for this game. In fact, because the computer opponent is so easily defeated in the one player version, this game can only be recommended for young children and older gamers with at least one friend who plays video games.

Although Imagic does not have a pretty game here, strong, fast action plus elements from Q*bert, Frogger, and the aged Springer 2 (both player and computer drove cars) make Quick Step a truly different game, if only because of the pot-pourri of elements. —*M.S.*

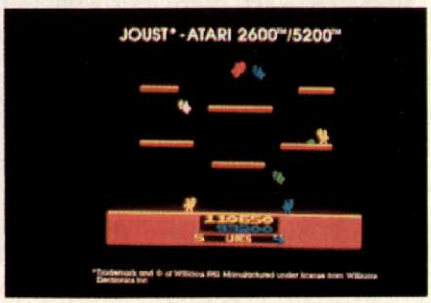
JOUST

(Atari/2600)

We can be thankful that it was Williams that came up with the concept for **Joust**. Another company might have taken the idea of knights riding ostriches at its face value, and turned it into a "cute" game with goofy graphics and silly sound effects. However Williams, with a roster of games that include Stargate and Robotron 2084, is a company not known for charming video games. As a result, Joust became a full-fledged combat game, and one of the most popular arcade entries of 1983. Now as one of the first games to be released as a result of Atari's long-term licensing agreement with Williams, Joust has been translated for use on the Atari 2600.

You are a lance-carrying knight astride an ostrich. And your adversaries are groups of other airborne knights (in the arcade version they ride buzzards; here their birds are identical to yours). Pressing the action button causes your ostrich to flap its wings, while left and right on the joystick indicates which direction you wish to fly. No lasers or smart bombs here, the only way to eliminate the enemy is by direct confrontation, ramming them with your lance as they try to do the same to you. An encounter is decided in favor of the knight who is higher on the screen, so survival is a matter of learning how to accurately drop down on your enemies before they can literally get the upper hand.

Don't think your troubles are over when you kill a knight, though. When you have gotten the best of another warrior, he turns into an egg that floats slowly across the screen. If you cannot grab the egg before a cracking sound is heard, it will hatch into the knight's next highest incarnation. Red-colored Bounders are lowest on the evolutionary scale, and the easiest to beat. Grey Hungers are smarter and more aggressive. And blue Shadow Lords, the highest stage of development, are swift



and merciless. Higher points are awarded for the tougher foes, but you're taking your chances if you let any knight evolve into a Shadow Lord. The game starts out with only Bounders onscreen and, in successive waves, introduces more and more Hunters at the start of each new screen. I assume that, in later stages of the game, you will also be forced to contend with the Shadow Lords at the outset, but I haven't gotten that far yet.

If your index finger gets tired from all that flying, you can rest your knight on platforms that are located at various heights on the screen. The platform configurations vary from wave to wave. After the second wave, the bottom-most platform is reduced to reveal pools of deadly molten lava at the extreme lower left and lower right sides of the screen. Dawdle too long on any screen and you run the risk of an encounter with the dreaded pterodactyl, a winged monster that travels a horizontal path across the screen. You don't have to defeat this beast in order to advance to the next screen, which is fortunate since the creature can only be destroyed by ramming a lance straight down its throat, a nearly impossible achievement.

Joust was one of the first arcade games to feature the revival of simultaneous two-player action and Atari has wisely included this option in their version. You can earn points by knocking off the other player (and, in fact, there's a so called "Gladiator Wave" that will award you a whopping bonus for doing so), but such an action is counterproductive. Therefore it is to the benefit of both players to team up and develop a joint strategy to vanquish your computer-controlled foes. You start out each game with five lives and gain a bonus life for each 20,000 points earned.

Atari has taken some necessary liberties in translating the arcade game to the 2600's limited memory. Eggs, instead of settling to a rest on one of the platforms, continue to float through the air until they hatch into new knights. Your player, once bested by an opponent, will always reappear at the bottom of the screen, rather than popping out of one of several trapdoors located on the various platforms. Arcaders will also notice the absence of the Lava Troll, the disembodied hand that drags your knight down to his doom should he blunder too close to the lava pits.

These are small omissions, though, and are more than compensated for by what Atari has managed to retain from the original game. The various waves of the original, such as the survival wave where you are awarded bonus points for merely surviving the screen unscathed or the egg wave where you have the opportunity of clearing the screen of six eggs before they can hatch into knights, ahve been brought intact to his version. As in the arcade counterpart, the controls are unbelievably sensitive. A firm, steady pressure on the stick and two or three flicks of the action button are normally all that's needed to get you where you want to go. The technique takes practice but , once you've got it, the feel is so true that it's as if you had actually mastered the physics of flying.

—*D.P.*

BOOK BEAT

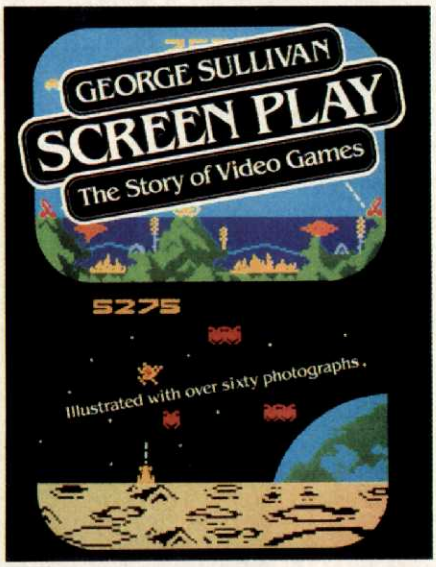
LIGHT READING
A Screen Play That Misses The Mark

By Richard Goodwin

"The era of video games is here," proclaims George Sullivan in *Screen Play—The Story of Video Games* (85 pages, $9.95 hardcover, $4.95 paperback, Frederick Warne & Co., Inc.). His thin volume attempts to survey the birth of the era and its growth for a young audience with some basic information on the technical aspects of the industry.

This can in no way be considered a definitive survey or even an adequate overview since it leaves much to be desired. Sullivan attempts to cover a great amount of ground and in the end has written little more than an extended article for an issue of *My Weekly Reader*. His narrative constantly refers to recent surveys, articles and releases, forgetting that a book is meant to last and therefore readers in 1987 will be reading about these "recent" reports. For a history book, he keeps losing his perspective.

Also, the entire book is ill-timed because there is far too much happening currently and most of the information presented in the 10 chapters is already obsolete. Sullivan does give us facts and figures regarding the number of software manufacturers and arcades around the nation, however, both have already suffered severe setbacks. Although he treats Atari as king of the video hill, Sullivan never touches upon their misfortunes, beginning with last year's failure of the *E.T.* and *Raiders of the Lost Ark* cartridges to become best-sellers.



The concluding chapter, "Today and Tomorrow," briefly reports on the third generation systems such as the Intellivision II and Atari 5200 and discusses how home computers and interactive discs will change the shape of games produced and the public perception of the games, but he stops there. He doesn't even discuss the constantly changing ColecoVision system.

Items he mentions, such as Atari's My First Computer, have not been released because of industry-wide retrenchment and he neglects to mention that arcades are suffering a downturn in growth. The two potential saviors of the arcades, Atari's Star Wars and Starcom's Dragon's Lair, are ignored even though both had been planned and announced during Sullivan's writing and researching.

It appears that George Sullivan didn't do extensive research since he continues to site the same sources chapter after chapter. He read the *New York Times, Electronic Fun & Games, Video Games* (of course), *Play Meter* and spoke with one or two people, but this doesn't provide great depth or much originality in his history, nor does he do any interpretation of what he had uncovered. Unfortunately, we are left really wondering about his views of the field.

Historically, he traces back to 1966 with Ralph Baer and the first games this pioneer designed and then patented. We rush along through the 1970s watching systems come and go without any sense of context or how they fit in with the changing technology and public needs. Sullivan is perhaps weakest in the 1980s with scant mention of the major forces beyond Atari, Mattel and ColecoVision. Important games get mentioned, but manufacturers, such as Activision, Imagic and Parker Bros. are almost passed over. Movies and licensing tie-ins get a brief nod but, as reported in this magazine, they have a far more widereaching impact on the games and the public than Sullivan gives them credit for.

Technically, he describes the growth of integrated circuits, microchips and the birth of Silicon Valley. Here, he does a great service to younger readers. An argument can be made for an over-abundance of superficial information in his opening chapter, however, the second chapter manages to nicely explain the purposes of the technology and how they fit together to make the games work.

One misgiving about *Screen Play* is that Sullivan dwells far too long on just one aspect of the ongoing controversy surrounding video games versus public morality. One chapter endlessly quotes Mrs. Ronnie Lamm. This Long Island mother's only claim to fleeting game is that she successfully led a campaign against the games, resulting in Brookhaven issuing a six month moratorium on arcade licenses. Obviously, Sullivan lives in the New York area and had access to Mrs. Lamm, but we get only her side of the story and only a story from a metropolitan area. "The War Over Video Games" would have been a much more important chapter if he had taken the time and effort to sample the entire nation in order to better gauge public opinion. I've never heard of wars against the arcades coming from Montana, Kansas or Kentucky, and most of the critics seem to be from either coast, never the heartland. That in itself may say something but Sullivan here remains conspiciously silent.

A few times Sullivan mentions how the military has asked for games to be adapted for training purposes. But we never find out if they have done their jobs properly and if the government has taken an official stand on whether or not the games do help eye-and-hand-coordination, or if they incite people to commit violence.

Graphically, the book is filled with publicity photos featuring games and systems—unless Sullivan took the photos which are then out of focus and pointless.

Younger readers would do better to leave this volume on the shelf and find a better source for their history of video games. Also, some more time should be allowed to pass before anyone attempts to record the history of an industry that is still unfolding and evolving almost daily. ▲

FLIPSIDE

(continued from page 53)

targets at the left (F-I-R) and three more at the right (E-P-O), while three more targets (W-E-R) are below and also on the right. In close proximity to the flippers, over on the left, is a metal ramp which leads up to a track elevated above the field and across to the right side.

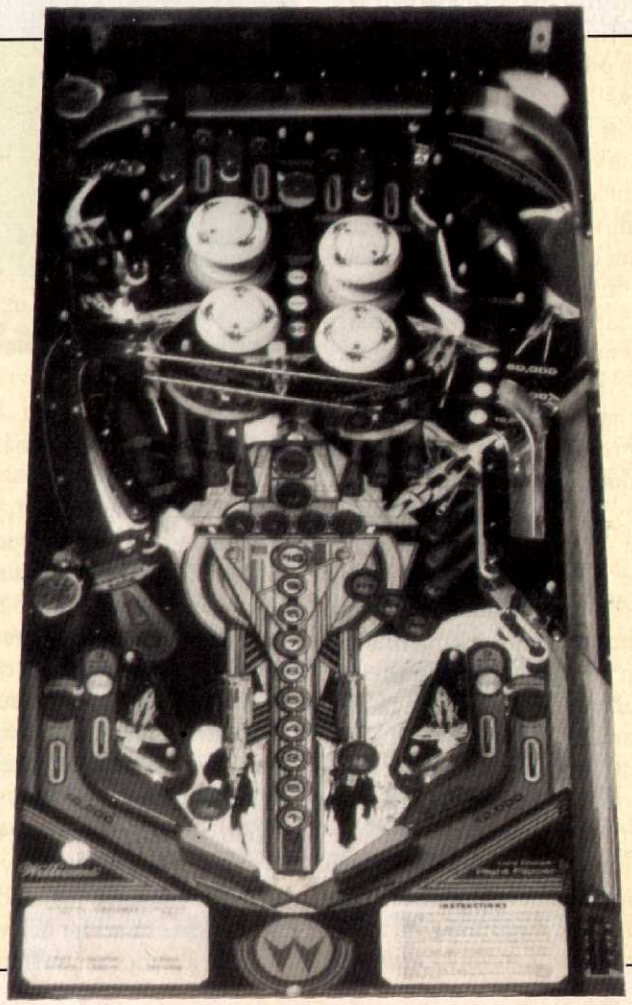
While the original Firepower reintroduced multi-ball play back to pinball after a lengthy hiatus, this version with all its embellishments seems to be a much more solid package where all the various features are integrated together. The top lanes, which have to be completed in order to gain a bonus multiplier of up to 5X, is aided by the use of the right flipper button to control the placement of any of the lights already lit.

The kick-out hole at the right upper portion of the board provides rather direct access for locking up a ball and advancing extra point values up to 50,000 points. Once a ball is captured, the center target just below the top lanes will be lit. Hit it and not only will you release that locked up ball for two-ball, multi-ball play, but any scoring at this point is worth double the value.

As for the other features around the board, completing any of the target banks at mid-field will also result in a timed reward via the spinner. Make this shot and have enough velocity to get the ball up and around and any out-hole bonus points will be held over for the next turn.

Besides this 'oribit' shot, Firepower II offers extra values for spelling out the various target letters such as the possibility of getting a special or having a chance to score a mystery bonus. This can be achieved by making the elevated ramp shot at the lower left and getting the ball to make the circuit up, across and over. All in all, the balance of design is obvious once you play the game.

Interestingly, both Firepower machines have something extra in common. The designer of the model released in 1980 just happens to be the brother of the person reponsible for this updated edition. This family affair has, indeed, proved to be impressive to say the least. Williams has a winner on its hands which should attract any and all pinball players. ▲



HARD SELL

Texas Instruments' Small Wonder: The Compact Computer 40

By Mark Brownstein

By now, practically everyone interested in computers knows that Texas Instruments has dropped out of the home computer marketplace. If you want a 99/4A, you can march into any store that still has one on its shelves for about $50.

For hundreds of dollars more, you can hook up a whole selection of peripherals that allow you to do all kinds of neat computer things with it. But don't expect any new hardware from TI, and don't be surprised about *anything* that happens in the area of software.

Although TI's escape from the personal computer manufacturing business may seem like a major move, the forces at TI, in all their wisdom, have correctly concluded that the axing of a product line should be limited only to the 99/4A. Fortunately, this leaves the Compact Computer 40 (CC 40) still alive and well.

The Wizards of Lubbock (or Dallas) have correctly concluded that the CC40 is not, and should not be confused with, the unsuccessful 99/4A. It isn't a 99/4A in a smaller box. It probably won't even appeal in the same way to the people who have bought the 99/4A.

The CC 40 won't play video games; it doesn't hook up to your TV screen and it only makes one sound (beep). The keyboard is smaller than the one on the 99/4A, and it only displays one line of text. For the typical game player (primary purchasers of most of the home computers), the CC 40 offers very little.

But, and this is a big "but," the CC 40 is something of a technological marvel that should find a place in the hands of many professionals, serious students, and possibly even serious 99/4A programmers. Measuring about 9¼ by 5¾ inches, this ¼ inch high unit is pretty portable. The computer is a sleek, silver-gray painted plastic and has a small, chiclet-style keyboard with surprisingly good key feel. A numeric keypad sits to the right of the keyboard (you can enter numbers from either the keyboard or the keypad), and many of the keys are dual or triple function. Unlike some other small-sized computers (Aquarius, for example), the CC 40 has a true space bar, and a shift key where it's supposed to be.

Above the numeric keypad are four keys, BREAK (to interrupt a program while it's running), RUN (to save you the trouble of typing three letters), ON and OFF (obvious functions). Also, if you don't use the computer for about ten minutes or so, it automatically shuts off.

Still higher up is a cartridge door, which allows you to plug in any of the limited selection of expansion cartridges available for this unit (specialized programs or additional memory). At the rear of the unit is a serial expansion jack and an external power supply jack. On the bottom is the battery door (TI very nicely supplies the four penlight batteries required to run the unit, which lets you start using it right away, instead of forcing you to make a quick run to K-Mart before you can crank the thing up), and a flip-down stand, which elevates the unit. On the left is a control which adjusts the contrast of the display.

A little bit about the display: It can handle an 80 character line, with 31 on screen at any one time. If you exceed the 31 characters, the screen allows left or right scrolling to see the rest of the line. The characters are of reasonably high resolution, with a 5 × 8 matrix for display. The display also provides status prompts which let you know when certain operations are running, or certain keys have been pressed (Shift, Function, Control, etc.).

The CC 40 comes with a clear plastic overlay which allows access to many of the important keywords you will probably need for programming or for doing your math homework. If the unit tips, blows over you may lose the overlay, so it may be a good idea to tape it down.

The CC 40 comes with a clear plastic overlay which fits on top of the keyboard. The overlay allows access to many of the important key words you will probably need for programming, or for doing your math homework. Unfortunately, you only get one overlay, and it only *sits* on top of the keyboard—if the unit tips, blows over, or gets a particularly strong gust of wind, you may fairly easily lose your overlay. You'll probably use the overlay a lot, so it may be a good idea to tape the thing down (although the tape may take the finish off the 40 if it's peeled off).

Presumably, other overlays may be required to run other programs (or other languages). For example, a built-in capacity for error and other messages in German will allow a German-speaking user to understand error messages and other prompts. We assume that as other languages became available (in the form of cartridges), their own equivalent overlays will also be provided.

The stripped down model features 34K of ROM (Read Only Memory) and 6K of RAM (Random Access Memory), although more RAM can be added. It also has what TI calls Constant Memory, which retains all input data even when the 40 is turned off. Therefore, you can feel comfortable about entering a fairly large program and not have to worry about it disappearing when the computer goes off. However, the 40 won't save values of variables or the contents of the display when it shuts off. If you need to keep the 40 on to preserve your variables, there's a routine which allows you to disable the automatic shut off.

So what can you do with it? Plenty. Without even getting into programming, you can do a lot of your mathematical homework with it. The 40 comes with a fairly complete set of logarithmic functions, uses scientific notation (to 14 digit accuracy), and can be quite simply programmed to perform repetitive and chain calculations. The CC 40 allows you to enter a formula and assign the procedure to one of the numeric keys.

To run the formula, enter the variables, press function and the assigned key number, and the solution is calculated for you. This can be a real time saver when it comes to a bunch of problems using the same formula (you can enter up to 10 different key sequences, or change them whenever you wish). As a calculator, the CC 40 may be a bit much, but it should easily be able to handle about anything you throw at it. (Probably the only major thing it lacks is a one-key factorial function, which would be useful in certain statistical/probability calculations. Conceivably, the same function can be programmed and assigned to a key, but it's a great deal of work).

When we go from a calculator to a computer, the strengths of the CC 40 become more clear. Programmed in its

own unique version of basic, this unit uses many of the same key codes as the 99/4A, but also provides some nice programming aids. We've already mentioned the addressable function keys (FN plus P prints Return, for example) which save a fair amount of keyboarding and also provides the required spaces between words. But another nice feature is the NUM command, which automatically numbers the lines in your program, giving each new line a number 10 higher than the last one numbered. It's a minor thing, but it helps if you have a large amount of inputting and don't want to bother keeping track of numbers.

The manual which is included with the CC 40 does a pretty good job of teaching you how to program in BASIC. The manual also warns programmers on other systems when the CC 40 procedures vary from conventional basic (this can help avoid some hair pulling later, when a program doesn't run). Finally, the references and appendices are also helpful in working through unfamiliar procedures.

As a portable computer, the CC 40 is a nice one to carry along. It'll do just about what you ask it to, from doing your homework, to writing or running a program, to playing some simple number games (programs not included). But despite all these strengths, the biggest selling point lies in its potential for expandability.

The cartridge slot we mentioned accommodates one software cartridge at a time. At the time of this writing, there were four available: Mathematics, Statistics, Advanced Electrical Engineering, and Finance; demonstrating that the computer was designed for specialized uses. The cartridges contain programs to perform the complicated calculations required by each particular discipline. What they do is save the time of developing, inputting and debugging the necessary programs, and leaving memory available for other things.

At $75, they may seem a big steep, but in time saved and convenience, they may look like quite a bargain for professional users. Additional memory should be available in cartridge form at some time in the near future. Texas Instruments hasn't planned for situations where you may want to use more than one cartridge at the same time (memory plus applications), although, not having seen the memory it may be possible that an applications cartridge may piggyback in some manner to the memory.

If you get a CC 40, you aren't stuck with a "dumb" computer—the serial jack allows you a great deal of flexibility. By using the jack, you can connect your computer to a four color printer/plotter which will reportedly be battery powered (and portable), and will allow preparation of graphics, charts, and program listings. You can also connect a wafertape drive for data storage (this system uses the Entrepo floppy wafer system that is in use elsewhere, and was almost part of Coleco's Super Game Module and ADAM). Texas Instruments is reportedly planning to release software on wafertapes, which can be loaded through this drive.

As a portable computer, the CC 40 is a nice one to carry along. It'll do just about everything from homework to writing or even running a program or just simply playing games.

While the peripherals already listed are coordinated to look good alongside the CC 40, you can hook the unit up to its RS232/Parallel Interface, and use this interface to drive many printers or plotters. Or you can hook it to a modem, and communicate with data services, CompuServe or the Source, or your neighbor's computer.

But even if your 99/4A isn't hooked up to communicate, there *may* be another way to hook the two together—The Hex-bus interface. The Hex-bus will interface printers, other peripherals, and external storage devices. But it will also convert the signals from the 16-bit 99/4A into a form that can be understood by the CC 40 (and vice versa). The possibilities are exciting—you can write a program on your CC 40, load it onto the 99/4A and test it out.

The 99/4A with its somewhat larger keyboard will make it a little easier to debug and edit. You can write a program on the 99/4A, download it onto the CC 40, and have it available whenever you need it. A working program can be backed up onto disk or tape (by the 99/4A), or onto wafer (CC 40). When you finish your classwork a half hour before the others (because you've used your CC 40), in that spare half hour, you can be designing the next great video game. Take it home, load it onto your 99/4A, and see if it runs. (TI claims that they will also have an Editor/Assembler cartridge to assist in assembly language programming.) Having the ability to make entries whenever and wherever you want, and then taking advantage of the potential power of the 99/4A, seems like a great convenience.

However, we must caution you that only four specialized software cartridges have actually been released for review. Although Texas Instruments seems to be eager to support the CC 40, it may eventually get cold feet. Before you buy, decide which peripherals you need (and find out their price), then see if or when they will become available. At the time of this writing, Texas Instruments was undecided about when or if the Hex-bus converter would become available, since its primary purpose was to connect the CC 40 to the 99/4A. In summary, then, given the uncertain state of Texas Instrument's completed products being marketed, it may be a bit risky buying this computer if you *need* the peripherals, since there may be some question about which ones will be released.

However, if you want a good portable computer; an exceptional calculator; and a good tool to practice basic programs on, the CC 40 is an excellent choice. If you need any of the applications that have already been written, the CC 40 is a better choice. If you don't *absolutely* need the printer, recorder, or communications peripherals, the CC 40 is still pretty good. It isn't a Radio Shack portable, but it isn't 800 dollars, either. ▲

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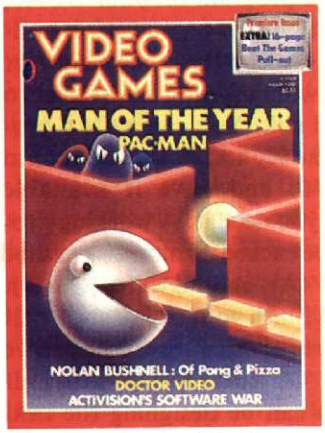
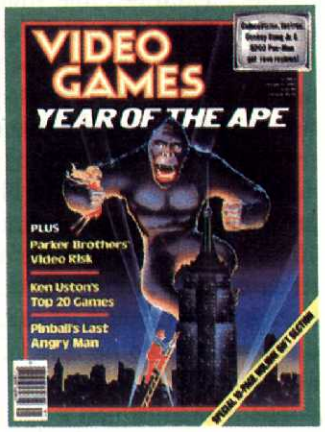


AUGUST '82-Premiere issue!
Interview: Nolan Bushnell; Pac-Man; Activision; Home Computers; Reviews: Atari VCS, Odyssey²; Beating Coin-Ops

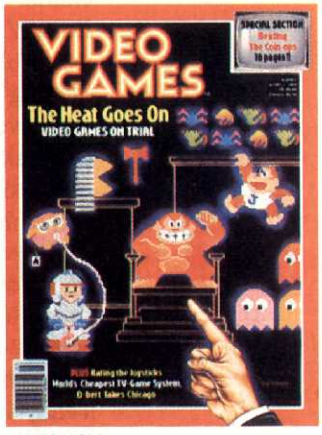
OCTOBER '82
Interview: Tim Skelly; Coleco; *Tron* Reviews; Intellivision, Astrocade, Dig Dug, Zaxxon; TV-game guide

DECEMBER '82
Ken Uston; Plimpton; Mattel; Bally/Midway; Atari; game programming; Atlantis; Pitfall; Caveman; Arcadia



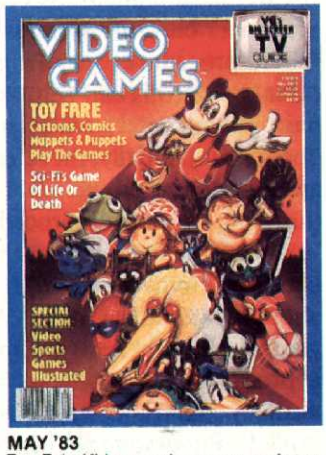
JANUARY '83
Bill Grubb, Dennis Koble; Donkey Kong; ColecoVision; Vectrex; DK Jr.; Q*bert; tip books; gift guide

FEBRUARY '83
Ralph Baer; video game movies; cable-TV; Atari 5200; '82 arcade scene; Special Section: *Easy Home Computer*

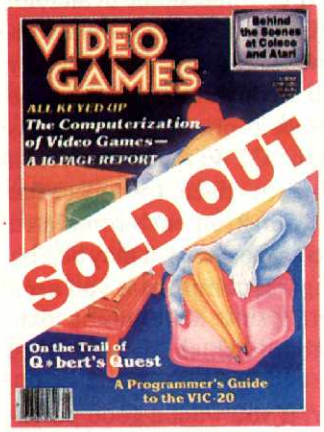


MARCH '83
Joysticks; E.T.; Raiders; Demon Attack; AMOA; Atari, Imagic & Coleco in court; Beating Top 15 Coin-Ops

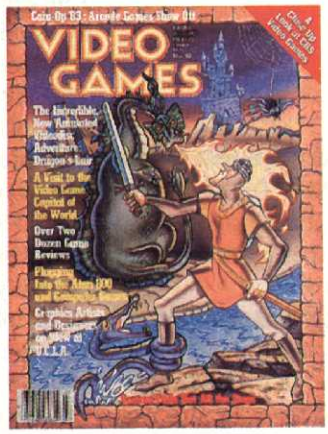
APRIL '83
Jim Levy; Q*bert & Joust; Comsumer Electronics Show; Silicon Valley; EPCOT; Timex 1000; Ms. Pac-Man cart



MAY '83
Toy Fair; Video sports games; cartoons, comics & muppets video games; VIC-20; interactive laserdiscs

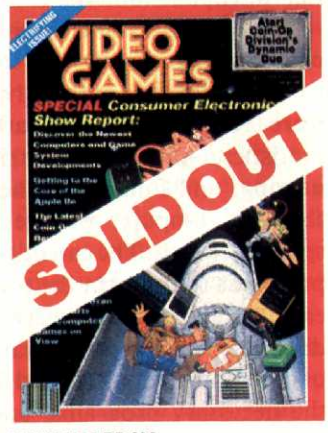


JUNE '83
Arnold C. Greenberg; Computerization of video games; VIC-20 programming; Rawson Stovall debut; sports games



JULY '83
Dragon's Lair; Vectrex; Atari 800 & computer games; CBS video games; Coin-Op Show; Graphic design

AUGUST '83
Frank O'Connell; Hot arcade & home games; TV's video game quiz show; Computer games; TI 99/4A; *WarGames*



SEPTEMBER '83
Consumer Electronics Show; Apple IIe; Mappy, Krull & Arabian coin-ops; Keystone Kapers; Astrocade & VIC-20 games.

VGB-V2-5

Mail to: VIDEO GAMES
Pumpkin Press, Inc., 350 5th Ave., Suite 6204
N.Y., N.Y. 10118

- ☐ $5 (Canada and Foreign $6) August 1982
- ☐ $4 (Canada and Foreign $5) October 1982
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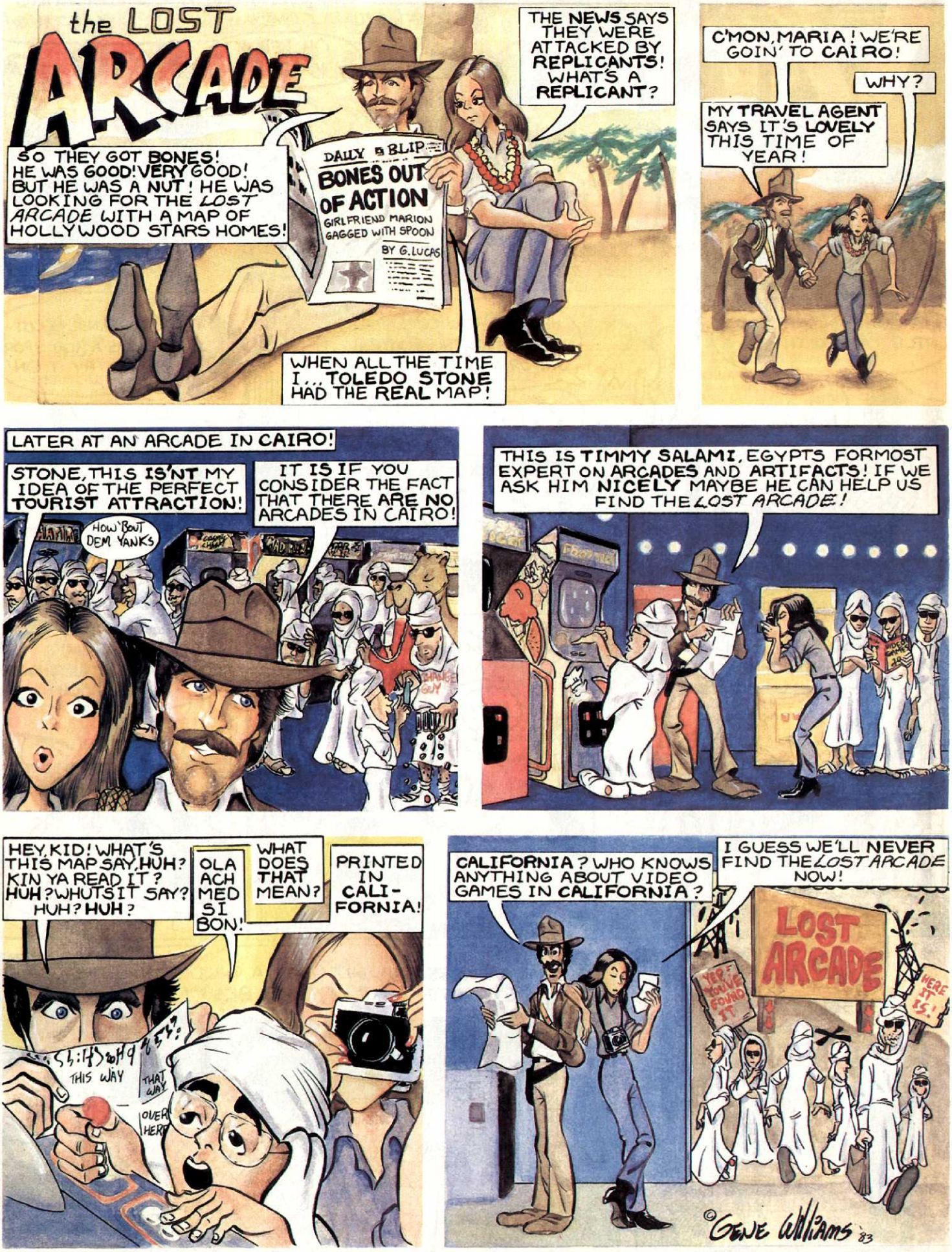
THE VIDEO KID
©1983 BY PETER BAGGE
LOOK AT THAT! HE JUST SITS THERE PLAYING THAT STUPID GAME ALL DAY! IT'S DISGUSTING!
OH, LEAVE HIM ALONE!
I'M GOING TO HAVE A LITTLE TALK WITH HIM!
OH NO!
HEY SON, HOW COME YOU NEVER WEAR THIS FOOTBALL UNIFORM WE BOUGHT YOU!
I DON'T LIKE FOOTBALL!
NONSENSE! FOOTBALL IS A REAL SPORT! HERE, TRY IT ON!
#&@!?!...
NOTHING LIKE FOOTBALL TO DEVELOP A MAN'S CHARACTER!
THERE! NOW YOU LOOK LIKE A REAL KILLER!
NOW GET ON OUT THERE AND MOW 'EM DOWN!
HUT!
HUT!
HUT!
HUT!
LATER.... I THINK SOMEONE IS SCRATCHING AT THE DOOR!
WE LOST.
I'VE ALWAYS THOUGHT THAT A CHILD SHOULD STICK TO WHAT HE DOES BEST!


the LOST ARCADE
SO THEY GOT BONES! HE WAS GOOD! VERY GOOD! BUT HE WAS A NUT! HE WAS LOOKING FOR THE LOST ARCADE WITH A MAP OF HOLLYWOOD STARS HOMES!
DAILY BLIP
BONES OUT OF ACTION
GIRLFRIEND MARION GAGGED WITH SPOON
BY G. LUCAS
THE NEWS SAYS THEY WERE ATTACKED BY REPLICANTS! WHAT'S A REPLICANT?
WHEN ALL THE TIME I,, TOLEDO STONE HAD THE REAL MAP!
C'MON, MARIA! WE'RE GOIN' TO CAIRO!
WHY?
MY TRAVEL AGENT SAYS IT'S LOVELY THIS TIME OF YEAR!
LATER AT AN ARCADE IN CAIRO!
STONE, THIS ISN'T MY IDEA OF THE PERFECT TOURIST ATTRACTION!
IT IS IF YOU CONSIDER THE FACT THAT THERE ARE NO ARCADES IN CAIRO!
HOW 'BOUT DEM YANKS
THIS IS TIMMY SALAMI, EGYPTS FORMOST EXPERT ON ARCADES AND ARTIFACTS! IF WE ASK HIM NICELY MAYBE HE CAN HELP US FIND THE LOST ARCADE!
HEY, KID! WHAT'S THIS MAP SAY, HUH? KIN YA READ IT? HUH? WHUTSIT SAY? HUH? HUH?
OLA ACH MED SI BON!
WHAT DOES THAT MEAN?
PRINTED IN CALI-FORNIA!
THIS WAY
THAT WAY
OVER HERE
CALIFORNIA? WHO KNOWS ANYTHING ABOUT VIDEO GAMES IN CALIFORNIA?
I GUESS WE'LL NEVER FIND THE LOST ARCADE NOW!
LOST ARCADE
YEP! YOU'VE FOUND IT
HERE IT IS!
©GENE WILLIAMS '83

Things are looking grim in the Universe as we know it. The big "GAME OVER" sign in the sky is about to flash for our heroes in the Bugs' last defense against the faceless alien horde ...

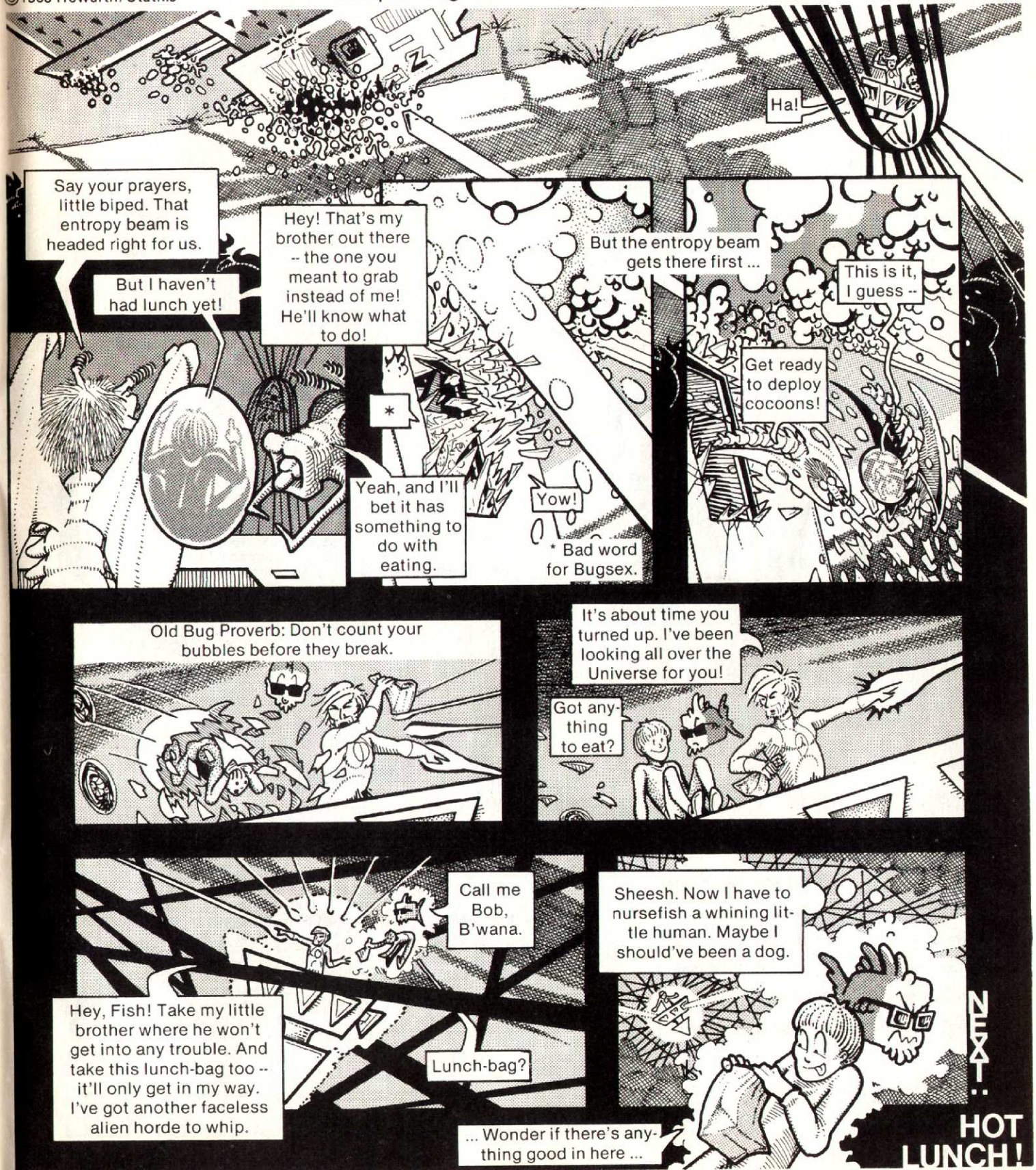
THE ZYDROID LEGION 8

But wait! Out of the other-dimensional void springs one last hope -- the long-lost Brother, armed with unimaginable abilities and ... a Lunch-Bag of Power?

©1983 Howarth/Stathis

Chapter Eight: **SIBLING RIFLERY**

Words: Lou Stathis
Visuals: Matt Howarth



STATS

Top Ten Home Games

Present Position 11/12/83	Last Position 10/29/83	Weeks on Chart	Game
1	1	13	Q*bert (Parker Brothers)
2	2	13	Pole Position (Atari)
3	4	37	Ms. Pac-Man (Atari)
4	3	19	BurgerTime (Intellivision)
5	10	7	Mr. Do (Coleco)
6	5	17	Robot Tank (Activison)
7	6	17	Jungle Hunt (Atari)
8	13	59	Pitfall (Activision)
9	8	23	Enduro (Activision)
10	7	11	Decathalon (Activision)

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Top Arcade Games

	Percentage
1. Dragon's Lair (Cinematronics)	100.0
2. Star Wars (Atari)	75.6
3. Pole Position (Atari)	68.0
4. Champion Baseball (Sega)	63.1
5. Crystal Castles (Atari)	59.9
6. Mario Brothers (Nintendo)	54.3
7. Q*bert (Mylstar)	51.8
8. Gyruss (Centuri)	51.7

Provisionally rated

1. Discs of Tron (Bally)	79.8
2. Elevator Action (Taito)	64.8
3. Krull (Mylstar)	58.3
4. Fax (Exidy)	55.9
5. Motorace USA (Williams)	53.2

These are the top earning arcade games according to a poll of operators. Provisionally rated games had a response rate of less than 25%. © 1983 by Play Meter Magazine

HIGH SCORERS

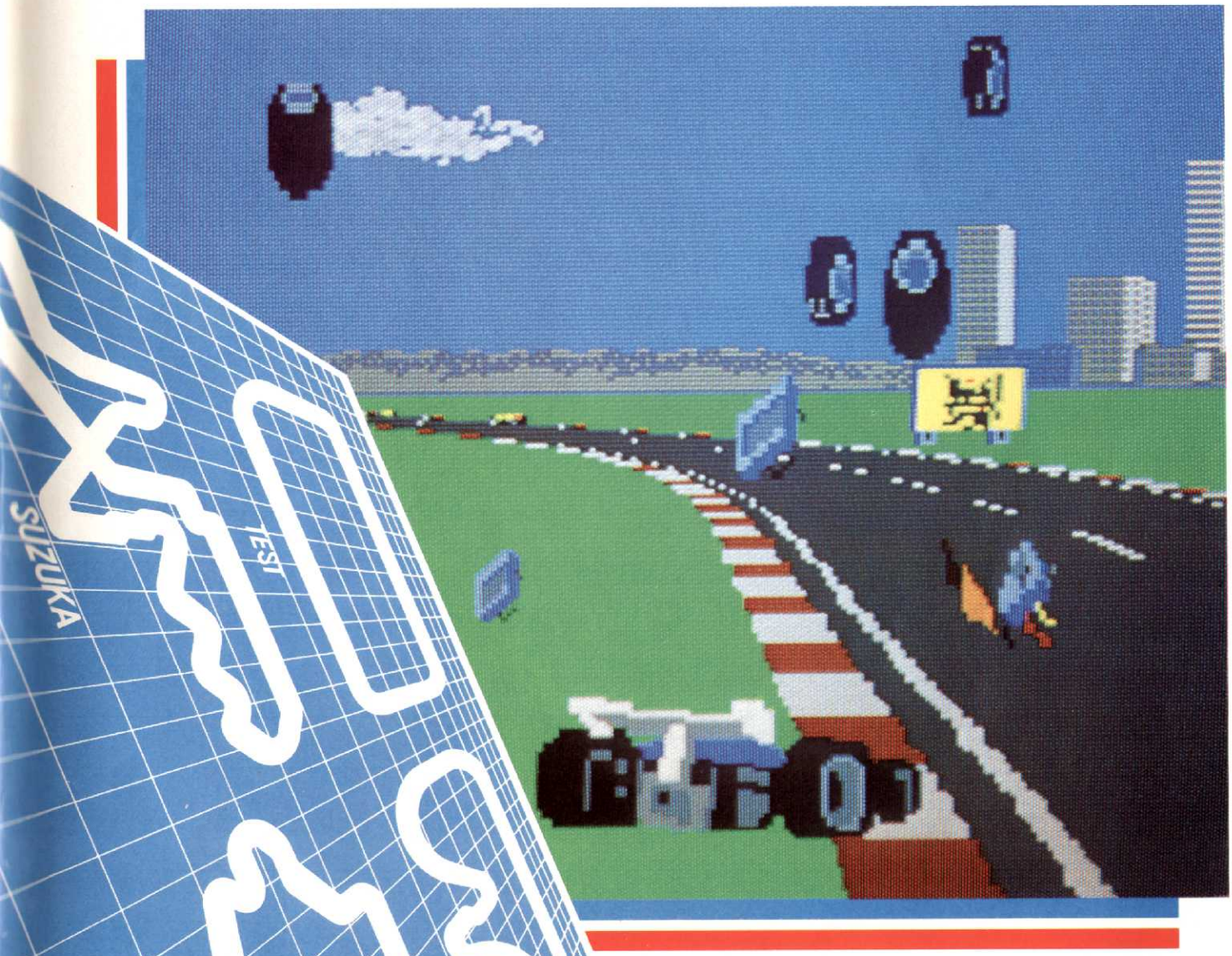
(effective 11/14/83)

Baby Pac-Man	6,685,130	Richard Sattilaro Edison, N.J.
Bagman	6,840,850	Gerry McCloskey Pentieton, B.C. Canada
Buck Rogers	1,016,495	Kelly Keenan Santa Maria, CA
BurgerTime	5,882,950	Darren Kenney Lakewood, CA
Centipede	16,389,547	Jim Schneider Spring Valley, CA
Crystal Castles	846,547	Eric Ginner Milpitas, CA
Champion Baseball	1,130,560	Gus Papas Upland, CA
Defender	79,976,975	Chris Hoffman Engelwood, Colorado
Dig Dug	4,129,600	Ken Arthur Blackburg, VA
Donkey Kong Jr.	1,259,300	Calvin Frampton Pleasant Grove, Utah
Dragon's Lair	558,724	Jud Boone Moscow, Idaho
Food Fight	25,335,200	Gregory Jew San Lewis Obispo, CA
Frenzy	4,804,540	Mark Smith Shelby, North Carolina
Frontline	727,500	John Dunlea Wilmington, No. Carolina
Gorf	2,220,000	Jason Smith Midland, TX
Gravitar	4,722,200	Raymond Mueller Bolder, Colo.
Gyruss	13,150,100	Jay Carter Raleigh, No. Carolina
Guzzler	431,108	Mike Klug San Jose, CA
Joust (new chip)	101,192,900	Robert Gerhardt Lloydminster, Alberta, Can.
Jungle Hunt/King	1,510,220	Michael Torcello East Rochester, NY
Journey	12,181,850	Chuck Coss Stubenville, OH
Liberator	3,016,010	Sean Middleton Anchorage, Alaska
Lost Tomb	20,597,520	Bill McCalister Oskaloosa, Iowa
Millipede	4,702,733	Steve Winter Pompano, Fla.
Moon Patrol (7 cars)	1,214,600	Mark Robichek Mountain View, CA
Motorace USA	2,045,500	Mike Headley Junction City, KA
Ms. Pac-Man	681,130	Tom Asaki Ottumwa, Iowa
Munch Mobile	2,035,540	Ivan Luengas No. Miami Beach, Fla.
Nibbler	838,322,160	Tom Asaki Bozeman, Montana
Pac-Man Plus	3,213,900	Shannon Ryan Upland, CA
Pengo (4 men)	1,110,370	Rodney Day Canberra, Australia
Pole Position E.T. 215.00	66,910	Mike Klug San Jose, CA
Popeye	1,439,430	Orlando Diaz Humaco, P.R.
Q*bert	32,204,485	Mike Lee Richmond, B.C. Canada
Quantum	1,387,420	Kevin Clark Columbus, OH
Robotron	348,691,680	Brian King Durham, No. Carolina
Satan's Hollow	43,339,497	Aaron Samuel Moscow, Idaho
Sinistar	468,670	Steve Harris Kansas City, Missouri
Star Trek	100,000,000	Tim Collum Dayton, Ohio
Super Pac-Man	588,430	John Azzis Santa Maria, CA
Star Wars (6 shields)	52,041,781	Dave Palmer Rocklin, CA
Xevious	999,990	Don Morian Seattle, Washington
Zoo Keeper	11,915,060	Roury Hill Myrtle Beach, No. Carolina

Our thanks to Walter Day Jr., of Twin Galaxies International Scoreboard (228 East Main St., Ottumwa, Iowa 52501). Readers who think they might have a high score should send a self-addressed, stamped envelope to Walter Day who will forward the necessary information and forms. Cities given are the location where the high scores were achieved.

NEW FROM ATARI COIN VIDEO GAMES

ATARI® INTRODUCES POLE POSITION II*... 3 NEW TRACKS!



SUZUKA. SEASIDE. TEST. Three all-new tracks plus the original FUJI make the Hot One even hotter! Whatever track you select, it's still that incredibly realistic test of driving skill and flat out endurance. You'll reel from the rush of souped-up graphics and special effects—like the actual "thud" you'll hear as tires break loose after a crash—and much more! Do you dare to put Pole Positon II through its paces? It's like nowhere else you've ever been. Check out all the new curves where you play coin video games.

ATARI®
A Warner Communication Company

* Pole Position II is engineered and designed by Namco manufactured under license by Atari, Inc.
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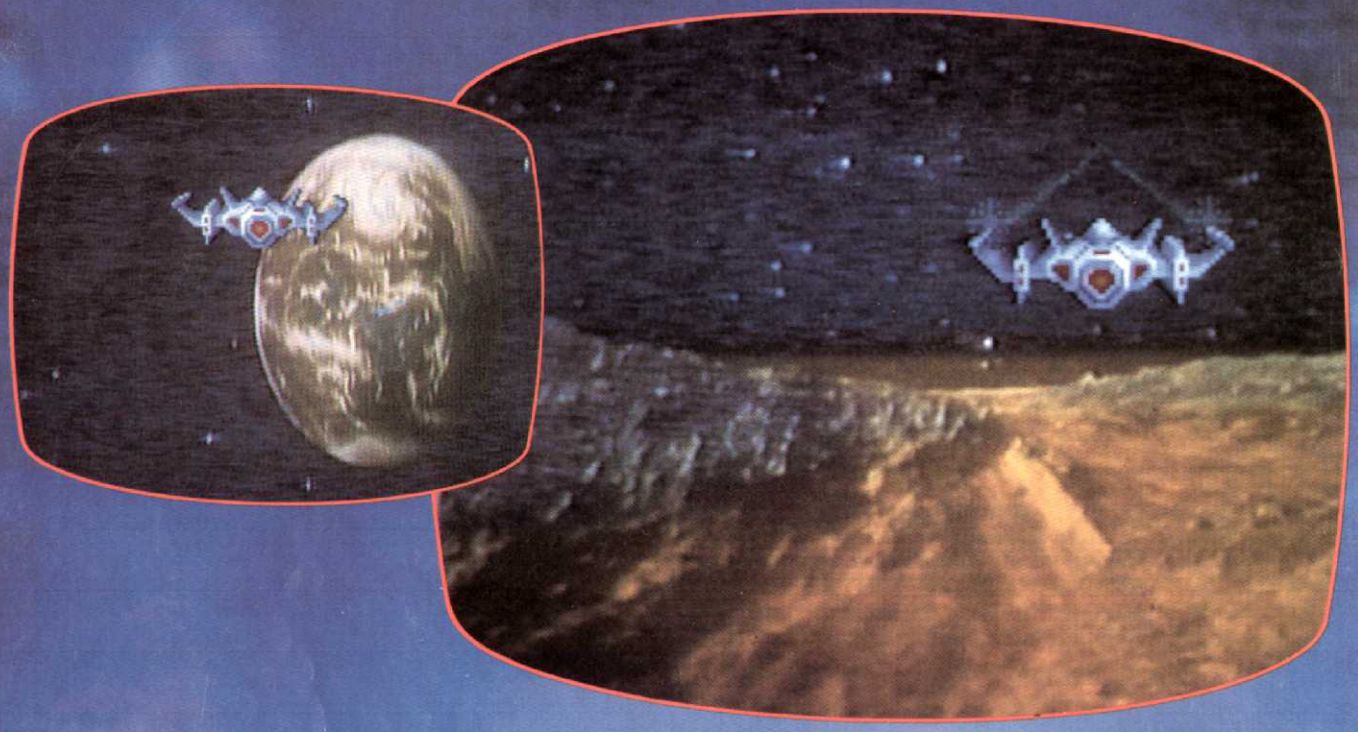
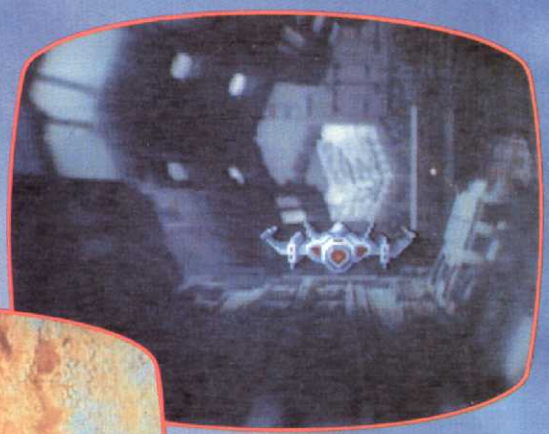
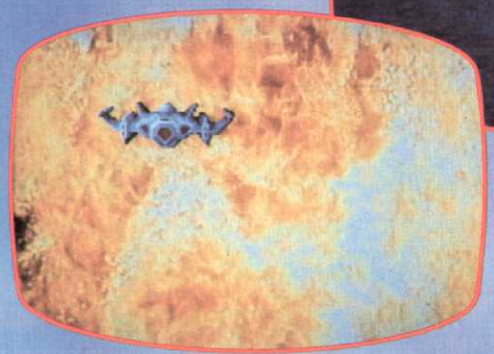
ASTRON BELT

T.M.



BOLDLY INTRODUCED IN '82
BREATHTAKINGLY PERFECTED IN '83
AVAILABLE TODAY





a laser video system from Bally MIDWAY

T.M.

"Astron Belt" is engineered and designed by Sega. Manufactured under license by Bally Midway Mfg. Co. TM & © 1983 Sega

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